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OIL WORLD

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December 15, 1951
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Washington Highlights

National Production Authority reported that the tank car construction program for the first quarter of 1952 may drop 20 per cent short of the level prescribed due to scarcity of materials. NPA announced that a total of 2500 such cars had been sanctioned for building in the first three months of next year. However, because of the acute material shortages, divisions of controlled materials to car builders will be enough to construct only 2000 of the oil carriers.

Lewis E. Hoffman heads a new division established in the Bureau of Land Management, Department of Interior. The new branch was set up to centralize development and leasing of oils and minerals on the public domain.

This new division, together with another supervising matters other than oils and minerals, supersedes the dissolved division of adjudication.

Hoffman joined the department in 1914. Since 1946 he has been chief of the minerals branch in the division of adjudication.

Bruce K. Brown, Deputy Petroleum Administrator, has ordered a country-wide survey of liquid petroleum gas bulk storage facilities. The Administrator has forwarded questionnaires to approximately 13,000 LPG producers, marketers, distributors and dealers. Requested is a report on the number of tanks they have. Also requested is a report on capacity in gallons of all tanks with a working pressure of 200 pounds or more per square inch gauge and the capacity of all tanks with less than that amount of pressure. LPG sales increased 173 per cent from 1945 to 1946.

The proposal set in motion by E. L. Cord and others to obtain tidelands in exchange for old Government lands scrip was turned down by Interior Secretary Chapman. Chapman made known he had denied all applications to acquire coastal lands along California, Texas and Louisiana. They were filed by Cord, former motor car manufacturer and 10 others. Cord is a resident of Beverly Hills, Calif. Applicants offered for the lands scrip the Government issued many years ago. This scrip or land certificates, permitted early settlers and Indians to select acreage of unoccupied public lands in exchange for ground which had been taken from them. Cord and his associates are understood to have paid more than $1,000,000 for the certificates they had collected for 4000 acres. In turning down the application, Chapman made public an opinion made by his department's solicitor, Martin White. The opinion held that the acreage applied for was outside the category of public lands and therefore must be rejected for that reason alone. In another aspect of the tidelands controversy, Chapman told Senator Tom Connally, Democrat of Texas, that he has found that the Department of Interior has no power to grant Federal oil and gas leases in the disputed coastal areas. The Secretary went on to say that while Administration experts are studying whether any other Federal department currently has the necessary authority, no decision has yet been reached with regard to the issuance of such leases with specific congressional authorization lacking.

National Petroleum Council has been requested by the Interior Department to launch a study to aid in mapping out recommendations to pipe mills on the most preferred production patterns as a means toward the full utilization of steel available. Walter S. Hallanan, NPC chairman, named Russell B. Brown, general counsel of the Independent Petroleum Association of America, chairman of a committee to make the study requested.

Senator Knowland of California, and Saltonstall of Massachusetts appear logical candidates for the Senate Republican floor leadership. However, there is a possibility that Senator Taft may support a third candidate more to his liking. The key GOP post was left vacant by the death of Senator Wherry of Nebraska. His successor will be named when Congress reconvenes in January. California's Knowland is recognized as strictly conservative on domestic issues, a critic of the Administration on Far Eastern policy and an internationalist on European affairs.

The U. S. Bureau of Mines has issued a report on the limits of flammability and the ignition temperatures of eight aromatic hydrocarbons of industrial importance because of their use as raw materials for many chemicals.

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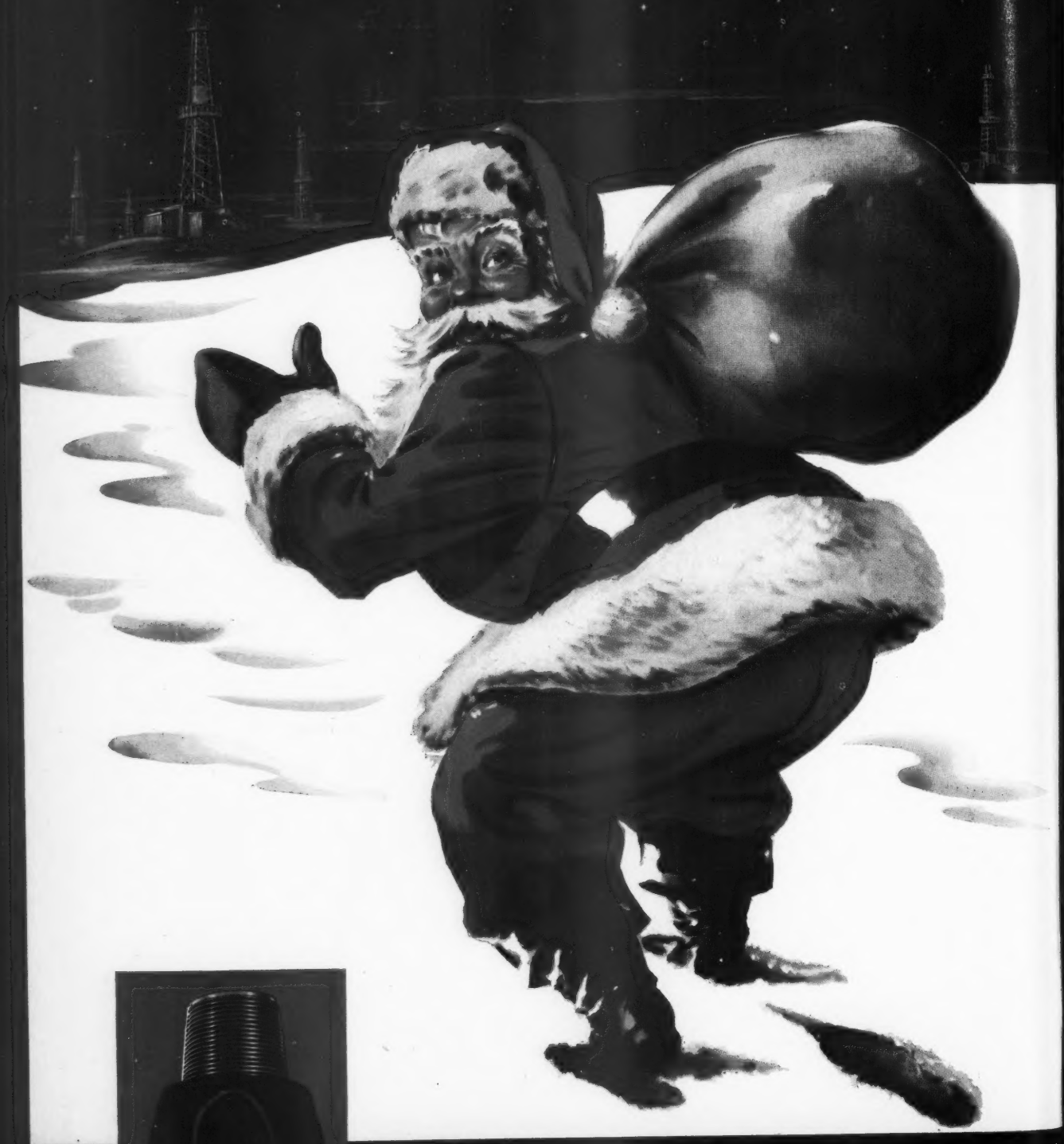


H C Smith OIL TOOL CO.

Liquid Recovery From Hydrocarbon Gases

By T. H. ANDERSON, JR.
and W. E. COLBURN
of C. F. Braun & Co.

Gas containing liquid fractions has been a source of revenue since the beginning of the petroleum industry. In the early days, kerosene was the industry's main product. Gasoline was a byproduct. Gases were flared as a general rule. But the condensate from the gas-lines found its way into sales outlets of one form or another. The liquid was worth more than the vapor. This economic drive continues to this day. It is this drive that has dotted our oil fields and refineries with gasoline-recovery plants.

The automobile switched the oil industry's emphasis from kerosene to gasoline. Real money was to be made salvaging the condensate from the gas-lines and recovering the gasoline fractions from wet gas. The horseless carriage widened the gap between the value of gasoline as liquid and gasoline as gas. This price-advantage launched the natural gasoline industry and sustains it today.

Early gas-recovery plants were built to recover a 12- to 26-pound Reid Vapor Pressure product. Liquid butanes and propanes were revaporized. Again the value of liquid over vapor was felt. About 1922, the so-called bottled gases found markets for these surplus liquids. The LPG—liquefied petroleum gas—industry came into being. It started with 223,000 gallons of bottled gas sold in 1922. Last year, the industry sold 3 1/3 billion gallons of LPG.

In the early days of the industry, not much was known of the behavior of hydrocarbons. The first plants were designed with more horse-sense and dead-reckoning than technical data. But our scientific knowledge of the light hydrocarbons has grown with the industry. Now the process-engineer has the tools to predict accurately the performance of any part of his plant.

This wealth of scientific knowledge has taxed the ingenuity of the engineer to squeeze the most out of his chosen recovery-process. But it is not within the scope of this paper to discuss the variations that can be used to increase recovery or improve performance. First, the engineer must select the basic cycle he will use. It is this first step that we treat in this paper.

There are four basic ways to recover liquids from wet gas. Adsorption. Condensation. Gas Fractionation. And Absorption. Let's take a look at each cycle.

Absorption

The use of a solid adsorbent is a well-known method for removal of components from vapors. This process was used in some of the early gasoline-plants. Activated coke was the usual adsorbent. However, the adsorbent picks up only a part of its total weight before it becomes saturated and must be regenerated. Thus a large volume of adsorbent and batch-operation are necessary.

Figure 1 shows a simplified flowdiagram of the adsorption process. In the first step wet gas goes through a bed of activated coke. The dry gas goes to the second step. Here the gas cools a bed of hot stripped coke. In the third step adsorbed gasoline is stripped by turning steam into the coke bed. The gasoline leaves as vapor. It is condensed, separated from the water, and sent on for fractionation.

Let's look at an adsorbent plant for 30,000 gallons per day of liquid-recovery. This is some 150,000 pounds per day. According to Perry's Chemical Engineers' Handbook coke will adsorb about 15 pounds of gasoline per 100 pounds of coke. At 4 hours per step, we would need 250 tons of coke. It is easy to see why these coke plants disappeared from the scene long ago.

However, the adsorbent cycle is selective. By proper control, the desired component can be picked out and recovered. The Hypersorption process takes advantage of this property. It overcomes another drawback, batch operation, by the use of a moving bed. This process is in commercial use for ethylene recovery. So far we have seen no reports on the commercial use of this process for propane and heavier fractions.

Until further refinements are developed, the adsorption cycle should be neglected by the process-engineer. One exception—the case of ethane or ethylene recovery. In such instances, the Hypersorption process may prove attractive. But since this process is a specialized cycle, we have not considered it in the general case of liquid-recovery from hydrocarbon gases.

Condensate Fractionation

Condensate was the first method of recovery—the drips from the gas-lines. These drips were wild and quickly evaporated at reduced pressure. Compression and condensation increased the yield. Subsequent rectification stabilized the product. But as long as the dry gas was separated directly from the condensate, some gasoline vapors were lost.

Where rich gases are available, the compression condensation cycle is often attractive. Only one fractionator is required. The gas off the condensate is small and the gasoline losses

FIGURE 1
ADSORPTION-CYCLE

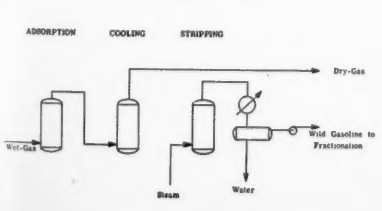


FIGURE 2
CONDENSATE-FRACTIONATOR

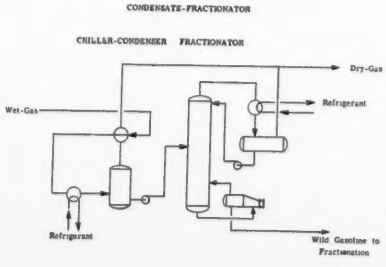
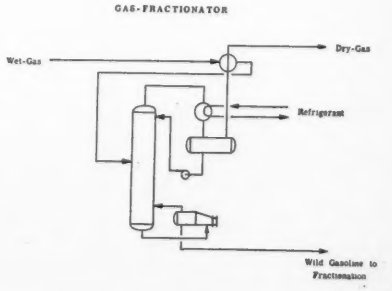


FIGURE 3
GAS-FRACTIONATOR



Merry Christmas

from Jarring Jerry and all the Johnston gang

approach a negligible quantity.

Figure 2 shows a simplified flowdiagram of a condensate fractionator. Here the wet gas is cooled, first by heat-exchange with the dry gas, then by refrigeration. The condensate separates in the accumulator and is pumped to the fractionator—a conventional non-condensing rectifier except refrigerant is used to condense top reflux. The top product goes direct to dry gas. The bottoms spill down into the fractionation system.

This cycle gives a constant-composition feed to the fractionator. A boon to the operators where widely fluctuating gas-rates are encountered. However, where refrigeration is necessary for desired recovery, hydrates are a problem. In such cases, drying of the feed is a must.

Gas Fractionation

The loss of gasoline in the condensate-fractionation cycle challenged the process-engineer. He came back with gas fractionation. Here he compresses and cools the wet gas. Then feeds the mixture to a single fractionating-column. This column splits the wet gas on a key component. The lights go out as dry gas. All the heavies come out in the bottoms liquid and spill down to the fractionators.

Figure 3 shows a simplified flowdiagram of this process. The compressed and cooled wet gas leaves the dehydrating unit. The gas is cooled by exchange with dry gas off the reflux drum. The cooled mixture goes direct to the fractionating-column. This is a conventional non-condensing rectifier. The overhead is cooled by refrigeration. All the condensed liquid is pumped back as reflux. The uncondensed vapors go off as the dry-gas product. A conventional steam-reboiler is used on the bottoms. The bottoms liquid spills down to the fractionators.

Once again the engineer found himself limited to a relatively rich gas. He had to operate the column below the critical pressure of the bottoms. And he had to have enough pressure or a sufficiently low temperature in the reflux drum to have liquid in equilibrium with the dry gas. Often this required hydrate-forming temperatures. And in such cases, drying of the feed is necessary.

Absorption

The absorption-cycle gave the engineer the answer to high pressures and low temperatures. Using absorption oil, the designer could operate above hydrate-forming temperatures. Pressures could be adjusted to suit the specific plant-conditions. Variation of the oil rate was all that was necessary to obtain the desired recovery.

Here was a cycle that could operate under any plant-conditions. This is the cycle that became and still is the backbone of the vapor-recovery industry. But it was no Utopia.

The absorption oil picked up every component in the wet gas. It took two stills to strip the oil. The primary still-pressure was a delicate balance to keep recycle vapors down, and excessive light ends out of the fractionating system. Low absorber-pressures took high oil-rates. High absorber-pressures cut the oil-rate but hiked the recycle. The engineer used vent tanks and reabsorbers to get the recycle under control. About ten years ago, he came up with the fatoil fractionator. This column enabled him to kill the recycle and use a single still. But no matter how the engineer struggled, he still had to have at least three columns and a sizable oil circulation rate to make his recovery.

A simple three-column absorption system is shown in Figure 4. The absorber removes the gasoline and LPG from the wet gas. The fatoil fractionator takes the dry-gas fractions out of the fatoil. The overhead gas usually goes to plant fuel. Any excess is recompressed to dry gas. The stabilized fatoil goes to the stripper. Heat and steam are used to split the gasoline out of the fatoil. Lean oil comes out the bottom of the stripper. Steam and recovered fractions out the top. They are condensed. The water is separated and drawn off in the accumulator. The wild gasoline is pumped to the fractionators.

Choice of Cycle

As usual, we find several features we like and several things we would prefer to avoid in each cycle. The engineer must first select the best cycle for his recovery. Then work out the refinements. If he works up all cycles with refinements, he finds himself in an endless task. He must choose at the start. And we confine our discussion to the basic factors he needs to make his selection.

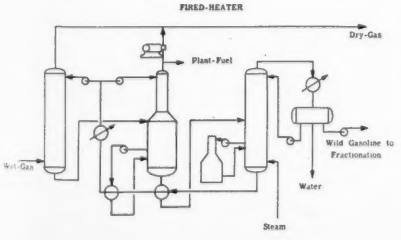
Feed rate affects the size of equipment. Variations in rate may temper his selection. But such factors affect all cycles in about equal proportions. The richness of feed and the entering pressure levels are basic factors which help make one cycle more economical than another.

The same recovery makes the same raw gasoline. The number of liquid products will set the number of columns in the fractionating section. Thus the fractionation section will usually be the same for all cycles. But the percent recovery makes the big difference.

Dry-gas conditions at plant-limits play a major role. The pipeline or repressuring pressure usually sets the maximum pressure in the plant. The exception is in refinery gasplants. There, tail-gas pressures are so low the engineer must use higher pressures to keep equipment sizes within bounds.

Pipelines have had their troubles with hydrates. If the tail-gas is sold, it often has to meet a low dewpoint.

FIGURE 4
ABSORPTION-CYCLE



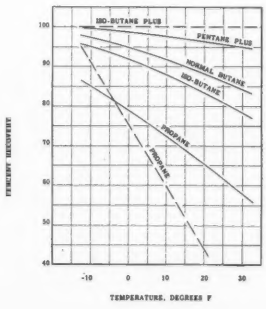


FIGURE 5
PERCENT RECOVERY
VS
TEMPERATURE

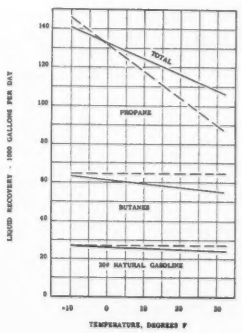


FIGURE 6
LIQUID RECOVERY
VS
TEMPERATURE

In such cases, drying equipment is required and the engineer can use temperatures down to the dewpoint. Pressure maintenance, cycling and refinery gasplants as a rule use the dry gas before it can be chilled to hydrate-forming temperatures. In these plants, the engineer must keep his temperatures out of hydrate zones or save enough to justify a drying system.

Utilities are not a problem at this stage of the process-design. Utility levels can be adjusted within reasonable limits without materially affecting the economics of the design. Limiting cooling-water temperature is the one fixed item. The engineer must stay within this limit or be prepared to pay for refrigeration.

We have three factors to consider when selecting our basic cycle. First, the feed gas—its composition, rate, and entering pressure. Second, the recovery or range of recovery desired. Third, the dry gas—its exit pressure and dewpoint. And we keep our eye on the cooling-water temperature.

Example

Let's follow the engineer as he applies these factors in the selection of a cycle. In our example the feed is 24 million standard cubic feet per day of wet gas. The pressure at the plot-edge is atmospheric. The gas composition is

Composition	Mol Percent
C_1	52.5
C_2	25.8
C_3	13.8
iC_4	2.0
nC_4	3.7
iC_5	.7
nC_5	.6
C_6^+	.9
	100.0

The dry gas will be sold. The sales contract calls for the gas to be delivered at 500 psig with a —10 F dewpoint. LPG propane, butanes, and 20 RVP gasoline are the liquid products, with 75-percent maximum propane-recovery to meet winter demands. Cooling-water temperature for design is 70 F.

With these conditions, the process falls into four steps. First, compression. Second, drying. Third, liquid-recovery. And fourth, fractionation.

The compression section must lift the gas to about 535 psig. This allows 35 psig for pressure-drop and control and meets the 500 psig requirement at the plant fence. Since this pressure is below the 800 psig retrograde point, all cycles will be more efficient at this top pressure level. Thus the same compression section will be common to all cycles.

The dry-gas dewpoint requires a drying section. Pressure assists the drying, so the drying section goes after the compressors. Either wet or dry gas can be dried. There would be little difference in either drying section. It is preferable to dry the wet gas, since this gives greater latitude in the recovery process. Then temperatures can be used down to the dewpoint without encountering hydrates. The drying section becomes common to all cycles.

Both condensate and gas fractionation would deliver an ethane-free liquid to the fractionation section. An absorption section using a fatoil fractionator for 75-percent propane-recovery would also deliver an essentially ethane-free raw gasoline to the fractionation section. Thus we can expect the same raw-gasoline feed from any cycle and the engineer can eliminate the fractionation section from considerations affecting his choice of cycle.

By these quick evaluations, the engineer finds he can focus his attention on the recovery section alone. But he must stay within pressure and temperature limits. 500 psig is his pressure limit. With 70 F cooling-water, 80 F is his temperature limit without refrigeration. With refrigeraton 0 F is a reasonable minimum temperature with a —10 F dewpoint. Any increased pressure or lower temperature would require extra equipment in another section. If the cycle is not economical within these temperature- and pressure-limits, the chances are practically nil that it could both justify additional equipment and become the optimum cycle at the same time. It is a good rule that the engineer should not look outside his limits for the optimum cycle.

The easiest cycle to check is the compression-condensation cycle. All that is necessary is a check on recovery at maximum pressure and minimum temperature. 525 psig and 0 F in our case. Under these conditions, some 43 mol percent condenses. This gives about 79-percent propane-recovery after losses in the condensate fractionator, 94-percent butane-recovery, and 99-percent pentanes-plus.

For gas fractionation the engineer checks equilibrium in the reflux drum between the dry gas and the reflux. Again limiting pressures and temperatures are used. At 525 psig and 0 F, propane-recovery is 75 percent—isobutane and heavier, 100 percent. The bottoms critical pressure is about 650 psig. This cycle meets requirements.

The next step is to check the absorption cycle. Here the engineer uses 525 psig main absorber pressure and 80 F lean oil. Refrigeration and intercooling are not considered because they are refinements. As such they do not affect the selection of the basic recovery process. Fatoil fractionator and still-pressures are established. And the oil rate calculated for 75-percent propane recovery—340 gpm.

Often this initial check eliminates one or two processes at the start. In our case all are tenable. But how do they compare in cost and utility-consumption? The engineer rough-sizes and rough-prices each cycle. He approximates the fuel and steam requirements. For a common denominator we convert all heat to fuel. This shows the gross heat input. Since the feed and products enter and leave at essentially the same temperature, the fuel requirement indicates the relative cooling load.

Table I shows the approximate costs, fuel requirements, and compressor horsepower. Plant costs are total for the plant ready to operate but less operating supplies, chemicals, and the like. The total fuel figure includes direct fired fuel, steam converted to fuel at 80-percent efficiency and compressor fuel both for gas and refrigeration. Compressor horsepower is total for gas-compression and refrigeration. The absorption plant would cost around 3¾ million dollars. Either fractionator around 3½ million. Comparing utilities, the total fuel for the absorption plant would be 2½ million standard cubic feet per day. But only 2 million standard cubic feet per day for the fractionators. Some 6000 horsepower are required for gas-compression. Refrigeration requirements raise the horsepower to 7300 for condensate fractionation. 6900 for gas fractionation. The gas and condensate fractionators are a standoff. They run a shade under the absorption plant plant in capital investment and some 20-percent under in fuel requirements.

Figure 5 shows the variation in per-

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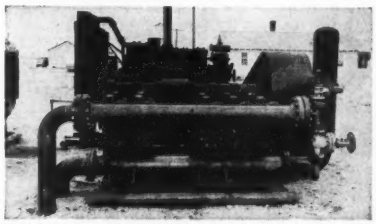

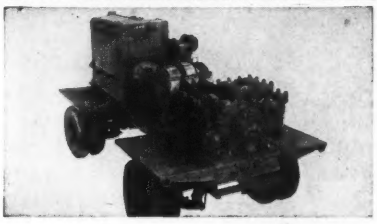

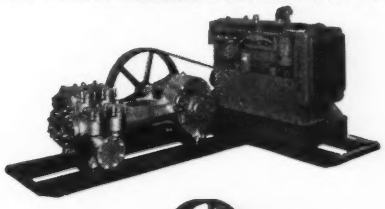

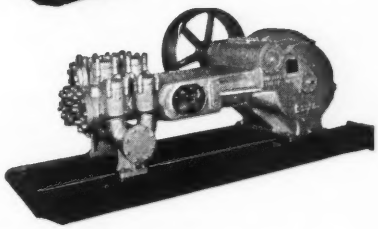

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cent recovery with temperature for the gas and condensate fractionators. The temperature shown refers to the lowest temperature in the unit. In the condensate fractionator it occurs at the outlet of the condensate chiller. And in the reflux drum on the gas fractionator. The solid lines show the condensate-fractionator recovery. With rising temperature propane-recovery falls off at a good rate. Butane recoveries drop, but not as fast. Pentanes-plus fall slightly. This is typical for condensate fractionators.

The broken lines show the gas-fractionator recoveries. Here the propane-recovery falls rapidly with increasing temperature. But the isobutane and heavier stay at 100 percent. This is typical of gas fractionators. In our case, the reflux drum temperature sets the propane-recovery. It is flexible over a wide range without disturbing the isobutane and heavier recovery. This fits in nicely with a seasonal propane demand. But how does this look in terms of gallons produced?

The total gallons produced per day by the gas and condensate fractionators is shown in Figure 6. Again the solid lines show the condensate recovery. The broken lines the gas-fractionator recovery. At 0 F both the condensate and the gas fractionator produce the same total gallons. The condensate fractionator produces more propane, less butanes, and a little less gasoline than the gas fractionator. But the butanes and gasoline are worth more than propane. Also the propane demand in our case is seasonal. During the summer the condensate fractionator has to condense the propane to hold a high butane and gasoline recovery. The gas fractionator can reject propane by increasing the reflux temperature. No butanes or gasoline are lost and the refrigeration load is lightened when cooling-water conditions are most adverse.

Table I

	Rough Price	Approximate Fuel Consumption	Approximate Compressor Horsepower
Absorption	$3,750,000	2500 MSCFD	6000 BHP
Condensate-Fractionation	$3,500,000	2000 MSCFD	7300 BHP
Gas-Fractionation	$3,500,000	2000 MSCFD	6900 BHP

Figure 7 shows a typical absorption plant. Normally seven columns. In this one nine, since hydrogen-sulphide removal and a deethanizer are included. The deethanizer enables this plant to get 80-percent or better propane recovery. From left to right we have the hydrogen-sulphide removal unit. The absorber and then the regenerator. The two small columns are the dehydrating unit. First the regenerator. Then the absorber. Next is the main absorber. The milk bottle column is the fatoil fractionator. Then the stripper, followed by the depropanizer, the deethanizer, and the debutanizer. All in the line of flow. Quite a string of equipment.

Figure 8 shows a gas fractionator. The equipment is housed for operation in 40-below-zero weather. The column in the right foreground is the dehydrator regenerator. The two center columns are the gas fractionator in the left front and the dehydrator absorber immediately behind on the right. In the left foreground is the depropanizer and in the background the debutanizer. Five columns to do the job. And in the liquid-recovery and fractionation sections, all conventional rectifying columns.

The economics point to the gas-fractionation process for these conditions. The first cost is slightly under the absorption cycle. With less fuel there are lower utility costs. There is no loss of butanes and heavier. The propane recovery can be varied widely without loss of butanes and gasoline. In operation we have a single column instead of three to make our liquid recovery.

Conclusion

It is not the purpose of this paper to imply that the absorption cycle is obsolete. Far from it. A small change in a key condition could make absorption the selection. Our purpose is to show that the comparison of recovery processes is not complicated. The process-engineer by using the proper data can quickly select his recovery process. And then proceed with his detailed designs in confidence.

Delivered at the Annual Fall Meeting of CNGA

Martinez Try Fades

Out of the development picture and into limbo has gone Lovely Petroleum Company's Almond No. 4 on Sec. 31-2n-2w in the Martinez area, Contra Costa County. Exploration was carried to a total bottom of 4610 ft. In Napa County's Vaca Mountains, Western Gulf is drilling at 8560 ft. with J. N. Knowles No. 1 wildcat on Sec. 28-9n-3w.

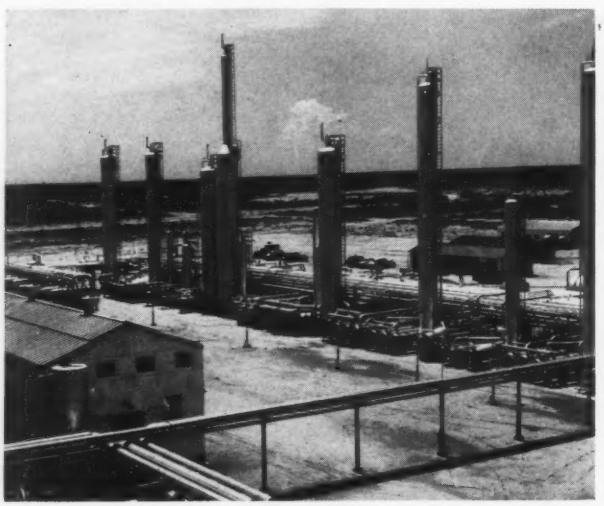


Figure 7

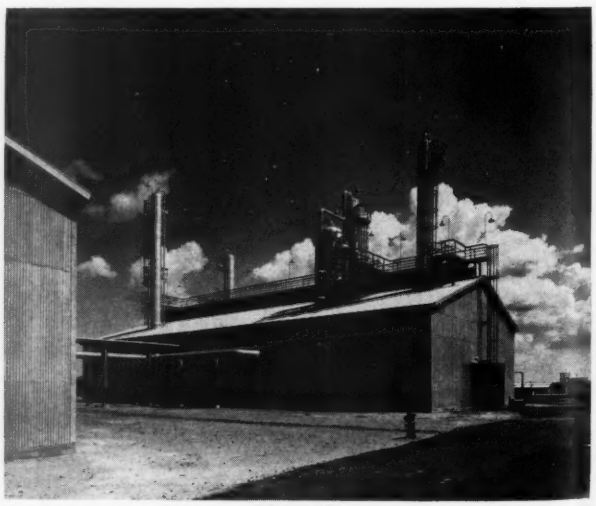
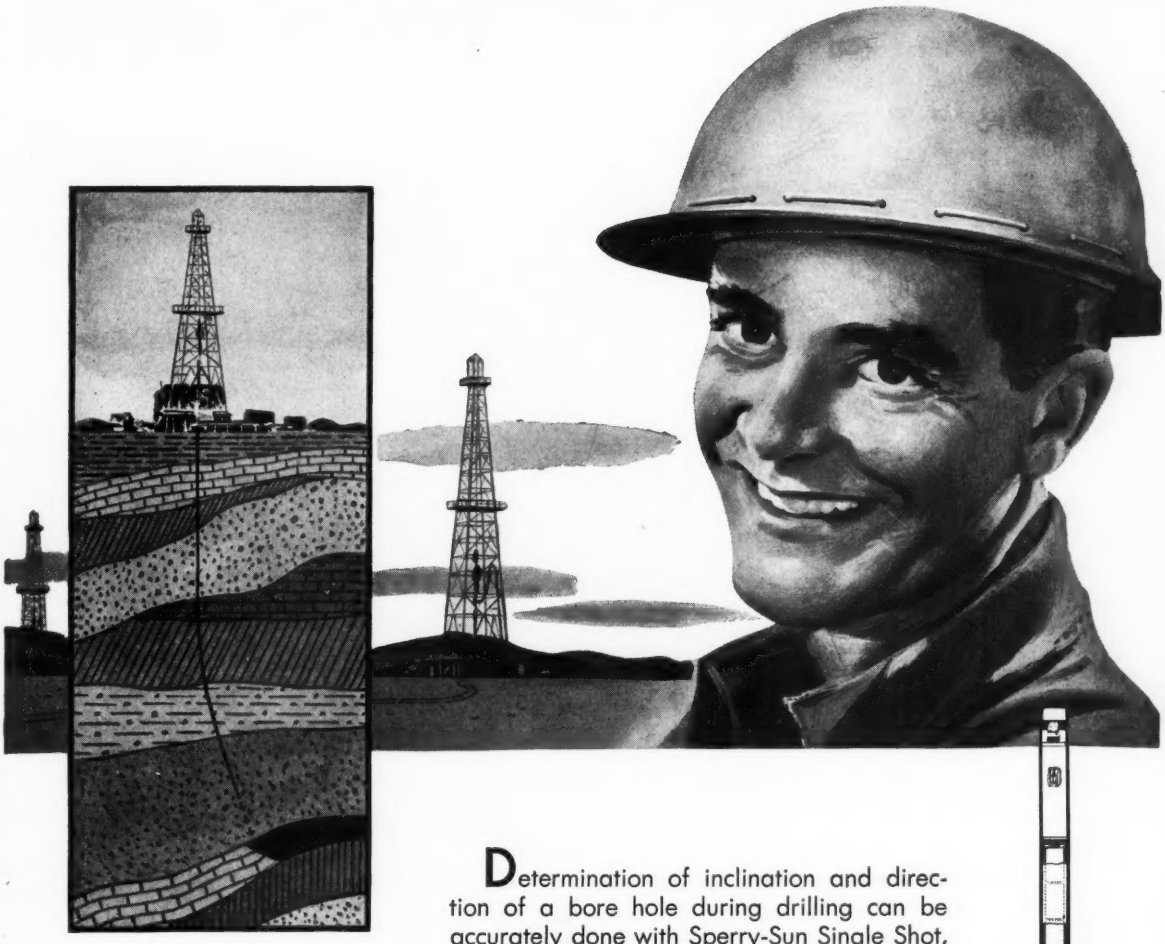


Figure 8

Want Inclination and Direction?



Determination of inclination and direction of a bore hole during drilling can be accurately done with Sperry-Sun Single Shot, a magnetic well surveying instrument.

The instrument can be operated either in a Non-Magnetic Drill Collar, or in the open hole. It may either be go-deviled into a Non-Magnetic Drill Collar or run on a line.

Use of the Sperry-Sun Single Shot is assurance of instrument accuracy that's dependable and service that assures satisfaction.

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Kern County OIL NEWS

PERPETUAL TELEPHONE conversations go on between Taft and Los Angeles wherever you pick up a receiver and connect with the Taft area. It only lasts for a short time or until the operator gets your number. Subject is always oil.

THIS HAS ALWAYS happened. We have mentioned it before. The telephonexperts have acknowledged it too. They tell you that any two phones will do that . . . "pick up conversations."

WELL, ANYWAY in the next paragraph you may know what we mean. We picked up some public or private line; and it was about oil, drilling, and price . . . the conversation on the line that is.

BILL AND JOE were doing all the talking. Here is what we heard: "Hello Bill . . . hour ye . . . they moved that line today . . . she acts on the strain . . . they'll take it all . . . no gushes since 1910 . . . that's a laff . . . steel's goin' tabeehell to to git . . . supply and demand seems to be in balance . . . in LA, this week and they look for a lag in production before the end of December . . . been slipping every week . . . don't know might get down before Christmas . . . can't afford to let five grand a day drop off the production line like they say is going to happen. Think I can up ours a little bit . . . Naw . . . there aint been no new oil the past month . . . ye might say no new discoveries have been made this year as far as fields are concerned . . . just opened up more" . . . the conversation ended here by an automatic cutoff when our party got on the line . . . So you see, this is how we . . . sometimes get the lowdown.

SPEAKING OF SUPPLY & DEMAND again . . . the gentleman's agreement theory obtains now in all fields. No violations, we are informed. Well, production is down a little and that may account for it . . . although it isn't nice to say so . . . Kern is not adding to the total daily decline. However, month's end figures may reflect that she is.

LOTS OF NEWS about the nine strings of Texas . . . Poso Creek's sudden abandonment . . Rio Bravo's extension to the N/W . . . but you

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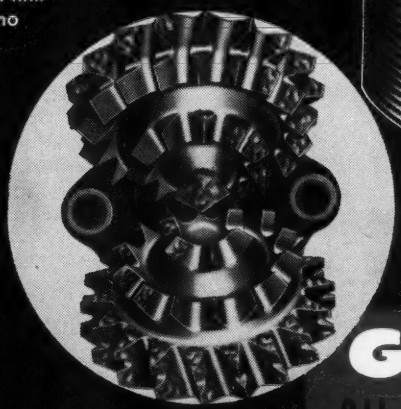
Globe Jet Rock Bits are now available in all popular sizes from 8½" to 15", in types SS2C, S2C, M2C, MH2C, and H2C.



Jet Nozzles are made of Tungsten Carbide to hold up under highest mud pressures . . . 9/16", 3/8", 11/16" and 3/4" diameters.

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have read this all . . . including jumping all over California . . . to areas like Hollister to Arvin.

BILL BAILEY of "DOG" is out of the hospital and able to renew his usual activities and extra curricular with the API here in the "oil valley."

TED EASTON who has been doing some private consulting, is still making the Tejon Hills just as interesting as ever. Something doing down there all the time. SAW TEX LEVERETT of Union and talked to ANDY ANDERSON of Amerada. Main idea is to find some more oil. Andy has nothing exciting on the string. Amerada has old Ant Hill which has about paid off . . . and Rio Vista gas which is about as exciting as ever.

LORENE TAVES is now with D.O.G. with Bill Bailey. Her better half is with the MUD DIVISION of the fraternity of Petroleum. AVIS DORIS, whom she succeeded, is with Lockheed Aircraft Corporation, here in this county.

AMERICAN PETROLEUM INSTITUTE here has elected new officers who take office at the first January meeting in Bakersfield. The election took place over in Taft at a meeting in the Petroleum Club. That is where it should have taken place. Each time the API meets in Taft now they are going to barbecue their steaks at that point. Next Taft meeting will be held in February, as we understand it.

KERN COUNTY LAND COMPANY engages its own geologist RALPH BRODEK, who shakes hands here with HAL HANSON who took his place out at Western Gulf Oil Company, so that he could associate with LEE RALPH, Superintendent of the K.C.L. Company's Oil Department.

OFFICERS: Chairman, BOB AYARS, Ohio Oil Co.; Vice chairman, J. N. CROOKER, Standard Oil Company of California at Taft; second Vice chairman, G. V. KERSTEN, Western Gulf Oil Company; and WILLIAM C. BAILEY, D.O.G. as Secretary Treasurer, a post he has held for a great many years. Next A.P.I. meeting . . . Third Tuesday . . . January 15.

TO THE UNION OIL COMPANY production department, came one day a month ago, one WILSON J. MONE who formerly lived at Arvin.

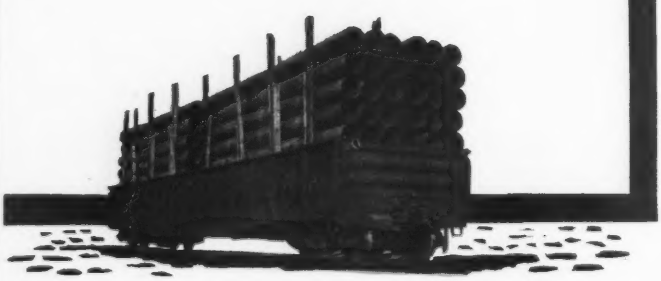
TO THE SHELL OIL COMPANY, land department, came JAMES F. REARSON from Whittier.

MICROPALEONTOLOGIST Division of Union Oil Company has added to its staff Mr. HAROLD G. BILLMAN. He comes from Carmichael as you know and has his family here now.

FRED KURVINK is here from Orange and is enjoying his assignment here with Richfield in the office.

MASON LOVE is with the Oil Well Service and hails from Artesia.

CONDUCTOR PIPE



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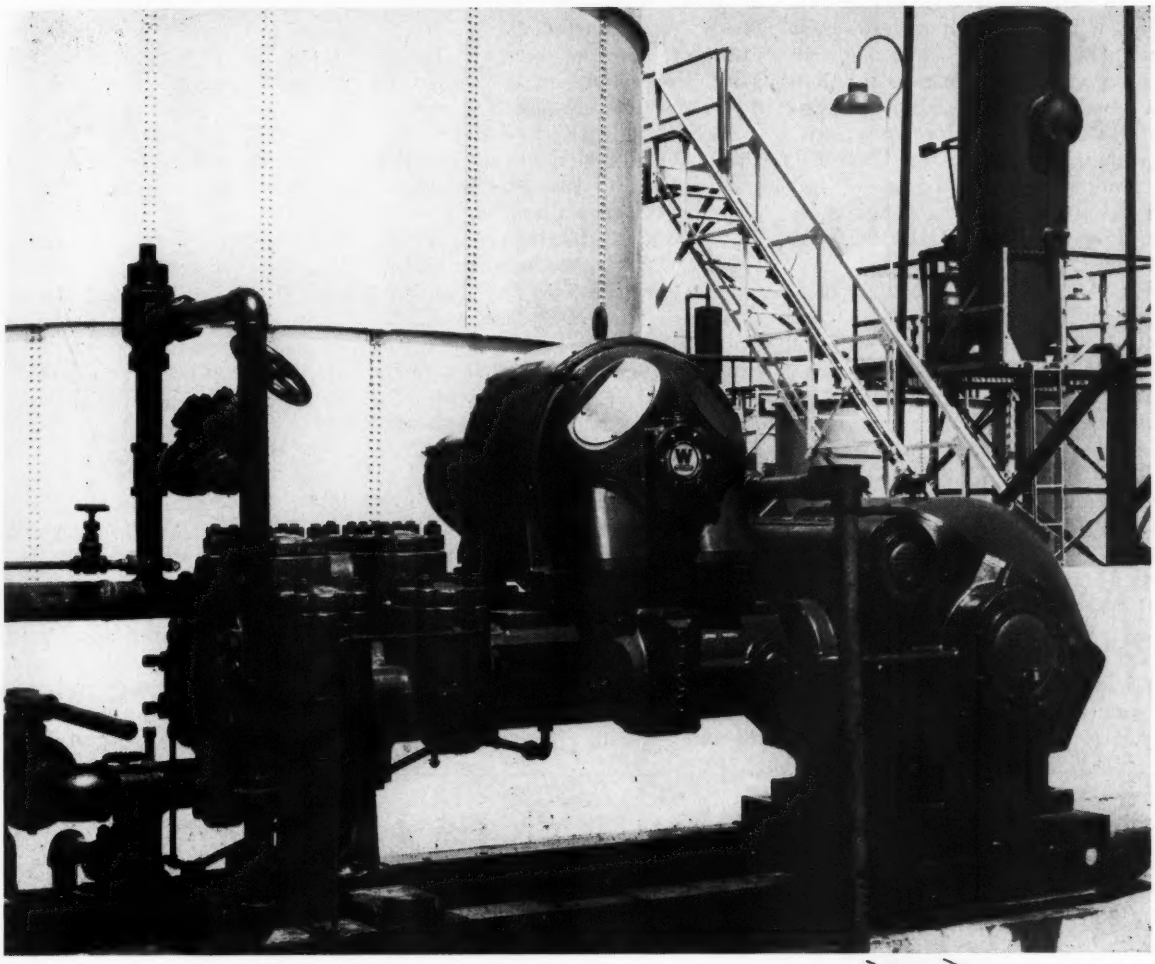
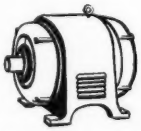


Consider electric equipment...on the nonstop runs!



Electrically driven equipment for the oil industry has many advantages—but none more evident than its perfect suitability to continuous operation. The power supply never runs low, never needs refilling. And no other power enables such perfect control, such trouble-free performance without the need for human supervision. With regular cleaning and oiling, electric equipment runs efficiently for long periods of time. Breakdowns are rare, repairs seldom necessary, production is up and costs are down.

Its **dependability** in operations which go on around the clock and the calendar is one big reason why electric equipment gets the nod in field, pipeline and refinery. It is far and away the best on nonstop runs!

Full information on electric developments for the oil industry is available—without cost or obligation—through your local Edison office.

SOUTHERN CALIFORNIA EDISON COMPANY

SAN JOAQUIN GEOLOGICAL SOCIETY elected officers last month also, and the chairman this ensuing year will be none other than our good old friend BILL CORTRIGHT of Tide Water Associated; vice chairman PAUL McGOVNEY, of Honolulu Oil Corporation; and the Secretariat chosen by the new board is BRAD McMICHAEL of Standard Oil.

FROM THE SUPERIOR OIL Company to the Western Gulf went BOREN WANGNESS. And BRUCE ROBINSON who has been with Fred Green, a consultant, is now doing probationary training period for Superior Oil Company.

BUD SMITH, chief geologist for Wilshire, has gone with BELL PETROLEUM.

LAST ISSUE we were very much hot and bothered about the new well and oil strike of a thousand barrels a day. Well, it's still a well and it's still a field, but we are not bubbling over with joy. Still a good well, though, they say.

JOHN R. CASTANO, geologist for Shell Oil Company is here, recently from Houston. Mrs. John R. (Loretta) informs us they live on Mint Street and hope to buy their own home in Kern County soon.

GENERAL PETROLEUM has added Warren M. McCombs to the staff in Kern County and he is employed as Branch Clerk.

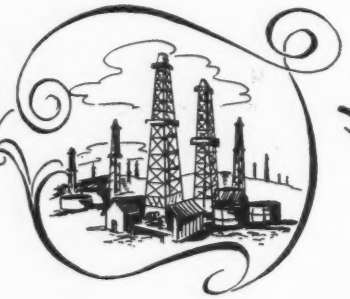
JOHN R. NULL is here from St. Louis to add to the services of the Oilfield Services owned by Bob Doe.

HERE IS another Texas boy up from Dallas as a geological craftsman for General Petroleum, EDWIN KNOX PRESSLY. Gee Pee is putting on a lot of men in every department this past month. Alton Rice in transportation and Guard R. Stevenson as gauger.

DR. VICTOR ZIEGLER of Worland, Wyoming, who came into his own after many years of self sacrifice likes to tell about his wife who helped him out at the derrick. She slept in dog houses on her night shift. Finally this Horatio Alger story winds up with a Rolls Royce for wife Isabella.

LATE LAST MONTH Kern produced a California Isabella and Victor. Their hardships were as bad. Food was their problem. They went broke three times and started out from scratch everytime, as late as almost 10 years ago. Born in Kansas, the hope to live out their lives in California, Mr. & Mrs. W. T. DICK . . . "Pops" and "Lillie" as they are affectionately known around El Tejon Hotel for a dozen years. They celebrated their golden wedding anniversary recently. Dick is the partner of DICK & DORE' OIL COMPANY . . . started with Superior Oil Co.

ONE MONTH A QUARTER of a year ago we ran up a picture of Loffland Drilling Company's fast equipment doing Kern County Land Company's first contracted-to-drill well. This was cause for some excitement . . . especially when some magazine announced that KCLCO was going into the "oil business" . . . friends vigorously denied this. By last month's end Kern County Land Company had hired RALPH



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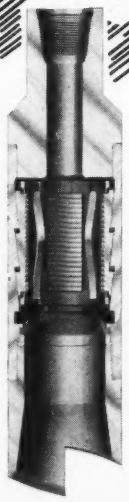

Husky overall construction and simple operation make the Bowen Socket ideal for outside holds on the toughest fish. Yet this tool is readily released whenever required, even after hours of jarring.

Made in two types—the L & L for all general purpose work, and the Crown Type for use where only a short hold is obtainable on the fish. Double-bowl assemblies can be supplied for catching drill pipe or tool joint. Available with or without pack-off features, in all popular sizes. *Call your nearest Bowen Service Store.*

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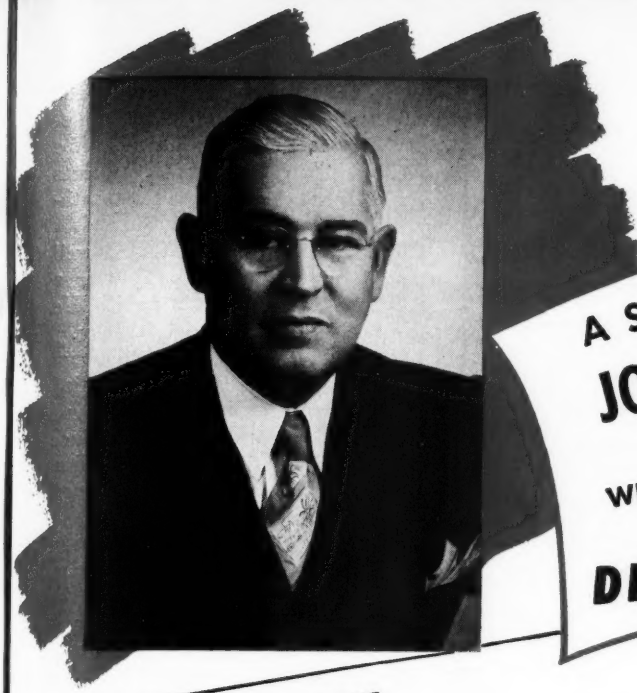

A STATEMENT by . . .

JOHN H. WILSON

PRESIDENT and CHIEF ENGINEER

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TO THE

DRILLING INDUSTRY

THIS NEW Wilson ATLAS RIG is the WORLD'S FINEST!

I would like for everyone in the Drilling Industry to see the NEW Wilson Rigs, study them and compare them with any other make of rig.

In the past few years we have completely redesigned our entire line of drilling rigs, from the console control and Air-Tube clutch drum in front to the new sectional plate type compound in the rear, THESE RIGS ARE ALL NEW!

These New Rigs are as far ahead of our older type rigs, or any other make of rigs, as our power rigs were ahead of steam in years gone by. You wouldn't compare a Cadillac of ten years ago with a modern car of any other make. And by the same token it isn't reasonable to compare a Wilson Rig of five or ten years ago with a late model rig of another make. Any comparison of these NEW rigs with our rigs of five or ten years ago, or any other rigs of today will open your eyes to the many outstanding improvements and exclusive advantages of the Wilson line.

We have now completed all the design changes which we know of at this time, and have standardized on these new models. We contemplate no further alterations. And all these new designs have now been proved superlatively good by more than two years of field experience, with almost no trouble, on more than one hundred rigs!

All these new rigs have been designed so they can be used either with or without torque converters, and with equally satisfactory results. *All multiple engine rigs are designed alike*, and all have the best features found in any drilling rig, and many more found only in Wilson rigs!

Customer after customer has reported these new rigs are the finest, most trouble free, most dependable rigs they have ever used.

With a rig for every depth, from "grass roots" to the deepest well that can be drilled, Wilson can take care of any rotary drilling rig requirement.

The two speed Air-Tube disc clutch drum, the two speed all friction clutch transmission, the sectional plate type compound, the direct rigid connection of engines to compound, the full vision console control, and now eight drum speeds, and two speed air clutch pump drive, are all Wilson Firsts that place these new rigs FIRST in the field of rotary drilling rigs.

Here without question are the finest Drilling Rigs Wilson has ever built; and we sincerely believe *they are the best rigs built today by any maker!*

You owe it to yourself or your company to *investigate* these new Wilson Rigs before you buy. Write, wire or phone for complete information *today!*

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BRODEK, formerly from Western Gulf Oil Company. The South Coles Levee well has gone into the pool . . . and the grapevine at the S.J.G.S. meeting says Brodek is figuring on a number of new locations about to be spudded in.

AL DEWIRE told us he can report that the conservation picture is good . . . more unitization . . . cooperation . . . & . . . conservation.

FOR KERN COUNTY another Lease Man out at Shell Oil Company, J. MINTON BROWN, from Ojai.

FIFTY YEARS AGO the first refinery in the San Joaquin Valley was completed. Today that refinery is still going strong . . . making among important things, Asphalt . . . the old Union Oil Company refinery. Where is it . . . right out there east of the Standard Oil Company's new installation.

BOB PLOMERT didn't think ear plugs were sleeping pills as did Dean Acheson, but he did try to pay the first installment of his firm's taxes on Saturday. The courthouse is closed . . . BOB knows that, but he thought there might be a window open for General Petroleum Corp. As a matter of fact lots of folk only come to the county seat to pay taxes . . . Why not . . . have a relief window open.

BERT MATTAI was in Los Angeles during the California State C. of C. annual meeting. He was visiting with Kern County oil wigs and officials. His assignment to the Highway Section is a welcome one for us here. However, Bert's intense interest was divided for an hour or so as his attention was directed to the Tax Section. When one sees a great man like Bert actually fearful of the tax structure and present trends, you can really be concerned yourself.

FIFTY YEARS AGO THIS MONTH the railroads here were unable to deliver oil to customers and many of them went back to coal, according to recent dispatches from local press, fans whom we have contacted this month.

THE KOSANKE WILDCAT which has not swabbed too satisfactory, is directly back of the Russell Ranch. Mr. Kosanke told us that completion will be attempted from one of five different levels in the 3824 ft. to 4120 ft. areas. Completion, if successful, will have to be credited for making new blueprints for drilling in that activity Northwest of Russell Ranch.

WILLARD W. GIBSON, a well known oilman in Taft for over a quarter century, died last month. He was with Standard Oil Company.

JOSEPH A. BLOS, well known associate of the oil fraternity, died late in November. He was employed with the Daily Midway Driller since 1922. JOE, as they all called him, was a champion "Drilling Log" printer.

WE WERE INTERESTED in knowing that sometime ago John O'Keefe, once superintendent of the Kern Oil Company here in Bakersfield, had joined E. W. Pauley as resident manager for some of Pauley's Mexican operations. His headquarters were to be in McAllen, Texas. Nearly a year has gone by and we have had no further word of our old Kern County friend. Have any of you?

TOM WOODWARD, who was API chairman and still is until 1952, turned in a good report with 625 members. He was program and membership program chairman previous to his general chairmanship. While no one else did, Tom did a little doubting as to the maintenance of that number . . . but he more than held . . . he gained. We will miss Tom as an officer but to us he will always be an advisorywig in our association. Good job, Tom . . . well done . . . see you in January.

Ridge Basin Wildcat Drills

Continental Oil Company has several interesting wildcats going in Los Angeles County territory. Elbe-USL No. 1 on Sec. 20-7n-17w in the Ridge Basin area is drilling at 5000 ft. Phillips No. 1 on Sec. 6-3n-15w in the Whitney Canyon area has reached 7800 ft. and is continuing to slug away on down. Rynne-Fisher No. 2, in which Continental shares interest with Ted Sterling and Paul Trousdale, is digging at 5830 ft. It is in the Castaic area on Sec. 35-5n-17w. Alexander No. 1 on Sec. 23-5n-17w at last reports was poking at 4380 ft. Bixby No. 62, a Seal Beach try on Sec. 2-5s-12w is growing deeper at 11,100 ft.

Field Development

Del Rey Job Tests

Conventional tests are continuing with Bolsa Chica Oil Corporation's Kidson No. 1-1 on Sec. 22-2s-15w in the Playa Del Rey area. Drilled to a bottom of 7418 ft. the swabbing trial last reported showed a flow of oil for a short period and then died. The project on water shut off test looked good, but since then has revealed little disposition to produce along commercial lines. Concensus at this time, however, credits the well with having poked into something of real interest. It was recalled by field men that many years ago Captain Libby, oilman and Lafayette Escadrille hero flyer during the first world war, drilled in the general area and had an experience similar with his well.

Hollister Well Tests

Texas Company's O'Connell No. 1 wildcat on Section 14-12s-4e in the Hollister area of San Benito County, which a couple of weeks ago gave every sign of promise, at this writing does not appear too encouraging. Eight trials already have been run from a total depth of 7419 feet and none so far has responded with commercial vigor. Gas was noted on some and two tests at least were wet. Shut off was okay at 5200 feet and the company is ready to interrogate further. Standard of California, meantime, is reported unofficially to have cored interesting showings with a core hole on ground 10 miles north of King City and 30 miles northwest of San Ardo. Information at hand at present indicates good oil shows were picked up first around 200 feet and the project currently was not many more hundred feet further down. This development, coupled with what has been shown by the Texas project so far and the Idria Oil Company's find on the Ciervo Anticline have stimulated interest of the driller in possibilities in many sectors in San Benito County.

Mount Poso Test Staked

Golden Bear Oil Company has staked location for a Vedder test well which will seek to extend the Mount Poso field in a northeasterly direction. The job is tagged Roos No. 1 and is on Sec. 35-26s-28e.

Rosedale Test Nears Finality

Humble Oil & Refining Company is giving a final touch to its August Prunotto No. 1 well, an extension test on Sec. 15-29s-26e in the Rosedale area in Kern County. Total depth is 7500 ft., with 7-in. casing cemented at 5976 ft. On formation trial of the interval of 5941-5966 ft., the well flowed salt water and showed a slight amount of gas. However, a previous trial performance from 5897 to 5911 ft. flowed oil in quantity. The company's T. N. Knight No. 1, a west offset job on the section, is drilling below 1600 ft., after setting surface string at 1222 ft. Humble's KCL C No. 2 on Sec. 14-29s-26e is grading ground.

Ramona Adds New Production

Superior Oil Company has just added a new deep zone discovery in the Ramona field of Ventura County. It took Black No. 14 on Sec. 13-4n-18w down to a total bottom of 7925 ft. and plugged back to 7795 ft. for completion. The well started off pumping at the rate of about 350 barrels of 20 gravity oil a day.

Kings County Wildcat Quits

Kings County wildcat operations have been interrupted by the cessation of drilling in a brace of wells. Approximately a mile and one-half northwest of the Norris discovery, Barnes Core Drilling Company's Lucier No. 2 on Sec. 19-24s-18e at Pyramid Hills found nothing of interest to 3162 ft. and then suspended further drilling. Electric log was run and the venture sidewall sampled. North of Pyramid Hills, Dohm Oil Company's Fairco No. 1 on Sec. 8-24s-18e was abandoned at 868 ft. General Petroleum Corporation's interesting exploratory project on Sec. 4-21s-21e in the Tulare Lake region is persevering with the drill below 10,100 ft. O. M. Slosson of Long Beach, who has been particularly successful in the Tejon Hills area of Kern County, is starting Reserve No. 2 on Sec. 35-23s-17e in the Kreyenhagen Hills. Location is no great distance south and west from Tide Water Associated Oil Company's Avenal Land Co. No. 1, which was drilled to 3111 ft. and abandoned in November, 1936. The Temblor was topped at 2830 ft. and on swabbing test of the interval of 2830-2930 ft. only salt water showed.

Morales Canyon Extender Flows

Flowing at the rate of 700 barrels of 36 gravity oil a day on formation test of the interval of 5355 and bottom at 5492 ft., Richfield Oil Corporation's Ritter C No. 23-11 extension test at Morales Canyon in Cuyama Valley apparently has accomplished what it set out to do. The well, one location south of production, is cemented with 7-in. casing to 5340 ft. More than a year ago Superior Oil Company opened in the area from the basal Miocene formation.

Los Angeles Basin

Gardena Try Scene

Being watched with considerable interest from both within and outside the oil industry is Gardena Royalties Company's Community No. 4-1 wildcat in the Gardena area. The venture, on Sec. 24-3s-14w, was last reported probing inquisitively at 6640 ft.

Northridge Test Rigging

Near the town of Northridge in Los Angeles County, Richfield Oil Corporation is rigging to begin drilling operations with its No. 1 wildcat on Sec. 28-2n-16w on the Mulholland property. Location is near the intersection of Aura avenue and Chase street. In the Puente area, the company is preparing to redrill Hurley No. A-1 on Sec. 9-2s-10w after going originally to 4798 ft. Golden No. 83-35 on Sec. 35-5n-17w at Castaic is making hole at 3840 ft., following completion of a minor fishing job.

Calexico Try Works

Texas Company's Jacobs NCT-One No. 1 exploratory venture on Sec. 18-17s-14e near Calexico in Imperial County has set whipstock to drill past fish. Present depth is 6735 ft. On the McNally Ranch in Los Angeles County, Texaco's No. 1 wildcat on Sec. 27-3s-11w is digging at 4930 ft. Gilbert Brown No. 1, a Texaco test on Sec. 28-4s-12w at Long Beach, last was drilling at 4120 ft. Stanley No. 1 on Sec. 34-5n-17w at Castaic is drilling at 4720 ft. Honor Rancho Two No. 1 on Sec. 36-5n-17w at Castaic Fork is moving ahead below 4900 ft.

Riverside Tests Idle

Three exploratory holes in Riverside County are idle at present. They are Andrew J. St. Pierre, Jr., St. Pierre No. 1, Sec. 26-5s-5w, Elsinore; Eugen Kronisch, Christopher No. 1, Sec. 3-5s-6w; Max W. Hammerling, M.N.H. No. 1, Sec. 21-4s-6w, Corona. They are inactive at respective depths of 830, 1190 and 250 ft., or approximately. In the Corona area of Riverside County, Ciroco's Ciroco-Wright No. 1 on Sec. 33-3s-7w is digging at 1480 ft. Cherrydale Oil is preparing to move in heavier equipment to drill on down from 2400 ft. with its No. 1 test on Sec. 8-3s-7w near Prado Dam.

Bartholomaus Wildcat Drills

No dope well, Bartholomaus No. 74-6, undertaken by Bell Petroleum Company on Sec. 6-2n-14w in Bartholomaus Canyon is drilling ahead near 4500 ft. In the San Fernando reservoir area, Los Nietos Company's Hartman No. 1 on Sec. 1-2n-16w recovered fish and is now drilling at 6872 ft. Los Nietos' Odeen No. 1, testing ground on Sec. 12-3n-17w at Pico Canyon, is poking steadily ahead at 3936 ft.

Tevis Morrow Oil Company's Peggy Moore No. 36 in the Placerita Field. Left to right: Henry Meyer, head well puller; Bud Clayton, helper; Curtis Clayton, helper.

La Habra Well In

R. E. Bering, Operator, York No. 3 on Sec. 30-2s-10w at La Habra Heights is in from 2400 ft. for an initial flow of 200 barrels of 17.8 gravity oil a day.

Seal Beach Well Pumps

One hundred and thirty-five barrels a day on the pump is the current rate of yield from Pacific Supply Cooperative's Hill No. 1 well on Sec. 3-5s-12w at Seal Beach. The McGrath zone was topped at 6685 ft. in drilling to a bottom of 7330 ft.

Newhall Try Pokes

Poking steadily ahead at 4505 ft. is the current status of Union Oil's Union-Ferguson No. 1 test on Sec. 31-4n-16w in the Newhall-Potrero area. The company's Needham No. 1 on Sec. 13-3n-16w in the Tunnel area was bailing at this writing. Total depth is 4008 ft., with plug at 1825 ft. Needham No. 2 on Sec. 12-3n-16w has set conductor pipe.

Chino Hills Test Drills

At Chino Hills, San Bernardino County, L. H. Cameron's No. M-8 on Sec. 32-2s-8w is drilling at 1130 ft. At Colton, John W. Brashears' Dana No. 1 on Sec. 26-1s-5w is idle at 2504 ft.

Orchardale Wildcat Digs

Western Gulf is busy drilling steadily ahead at 2180 ft. with its Unit A No. 1 on Sec. 10-3s-10w in the Orchardale area. Rancho Oil Company is preparing to drill a test well on Sec. 6-6s-10w in the Huntington Beach area. It is called Lamb No. 1-6.

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Reyes Peak Test Drills

The bit is making progress below 8250 ft. in Standard Oil's Hattie Russell No. 1 wildcat on Sec. 11-6n-23w in the Reyes Peak area, Ventura County. Standard's Pidduck No. 1, a test on Sec. 20-2n-22w at Montalvo, continues to forge ahead at 1170 ft. Superior Oil's Chismahoo No. 1 explorer on the Santa Ana Rancho on Sec. 9-4n-24w is digging at 1146 ft.

Ojai Try Drilling

In the Ojai area, Bankline Oil's B. & L. No. D-1 test on Sec. 12-4n-22w is making progress with the drill below below 6800 ft. In the Upper Ojai area, Richfield's Hillside No. 1 on Sec. 8-4n-21w has spudded.

Red Mountain Wildcat Active

Amerada Petroleum's H. & S. No. 1 oil hunter on Sec. 9-3n-24w at Red Mountain in Ventura County is digging away at 1146 ft. In the Oxnard area, veteran oilman Jack Herley is ready to complete at 2788 ft. his J.H. No. 1 test on Sec. 6-1n-21w.

South Mountain Wildcat Working

Ohio Oil's Norman Richardson No. 1 wildcat on Sec. 24-3n-21w in the South Mountain area is down 900 ft. and moving in heavier equipment. Newhall Land & Farming Company's County Line No. 1 test on Sec. 32-4n-17w on the Ventura County portion of the Newhall-Potrero area is drilling at 6770 ft.

Tepusquet Test Digs

Rancho Suey No. 1 test sponsored by British American Oil Producing Company at Tepusquet, Sec. 5-10n-34w, is drilling at 3208 ft. The company's Santa Ynez Unit No. 1 test on Sec. 6-5n-29w is ready for tests after plugging back from 4002 to 3170 ft.

Goleta Job Sets Casing

Having set surface pipe at a depth approximating 200 ft., Rothschild Oil Company's Bishop No. 1 wildcat well on Sec. 7-4n-28w on ground north of the Goleta field is drilling on down toward objective. In the Corral de Quati area, Shell Oil's Orton No. 2 on Sec. 27-7n-30w is drilling at 6250 ft.

Harris Test Near Spudding

Approaching the spudding act is Union Oil Company's Harris No. A-2 wildcat on Sec. 12-8n-34w in the Harris area, Santa Barbara County. In the Guadalupe area, Los Nietos Company's LeRoy No. A-3 on Sec. 22-10n-36w at last reports was drilling at 5160 ft. The Cat Canyon wildcat undertaken by General Petroleum has reached 1100 ft. It is known as Houk No. 43-9 and is on Sec. 9-9n-33w. Geepee's Camulos Rancho No. 1 in the Camulos area of Ventura County is making hole ahead below 8200 ft. Location is on Sec. 21-4n-18w.

Wheeler Canyon Wildcats Staked

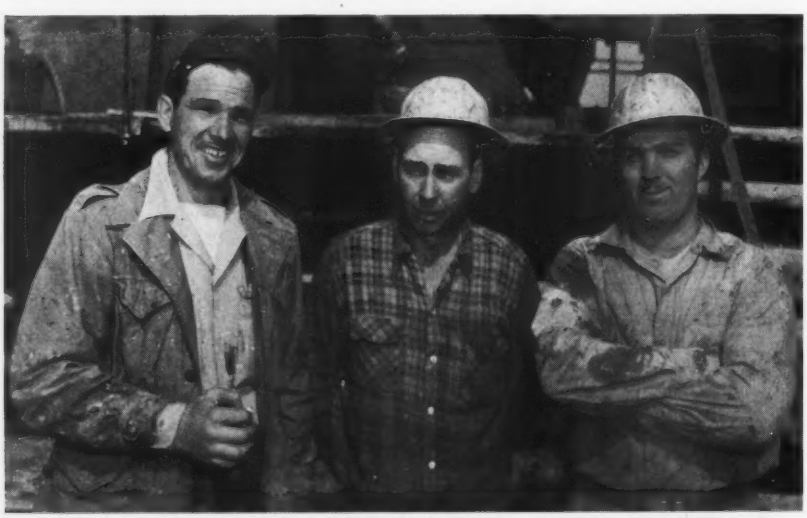
Union Oil Company is starting Ex-Mission No. X-5 on Sec. 26-4n-22w and Ex-Mission No. X-6 on Sec. 30-4n-21w at Wheeler Canyon, Ventura County.

San Ardo Area Adding Interest

Wells completed in the San Ardo area of Monterey County usually are good for an average of about 100 barrels of crude oil a day from depths approximating 2000 or 2100 ft. Texas Company, however, has made exception to the normal procedure there with its Orradre No. C-3-11 on Sec. 11-23s-10e. This well for some weeks has been the subject of a special test and is continuing to show around 400 barrels a day on the pump from 1834 ft. As a result of development at San Ardo the field now accounts for a total daily average of some 15,000 barrels of crude oil. Texas Company and Jergins Oil practically control the field. Superior is interested in a minor fashion and Standard of California is drilling its Alexander No. 36-5 near by on Sec. 5-23s-11e. Operations at present are below 2100 ft. Texaco has programmed between 40 and 50 more drilling jobs for the field proper. Near King City, the company is drilling at 1620 ft. with Pettitt No. 1 wildcat on Sec. 24-20s-7e. Alice Garrissere Two No. 1 is a location on Sec. 24-22s-9e at Los Lobos. In Peachtree Valley, Union Oil's Mee No. 1 on Sec. 11-20s-10e has reached 5555 ft. Ground is being graded for Mee No. 2 on Sec. 16-20s-11e.

Yolo County Test Succeeds

Success attended Mohawk Petroleum Corporation with its Winters Comm. No. 8-1 gas test on Sec. 13-8n-1w in the Winters area of Yolo County. The project drilled to a total bottom of 5010 ft. and plugged back to



Tevis Morrow Oil Company's K. P. M. No. 23 in the Placerita Field. Pike Drilling Company, drilling contractor. Left to right: D. W. Hooper, driller; R. J. Barnhart, derrick; J. D. Cooke, cathead.

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4867 ft. for completion is either a field extension or an entirely new strike. It started off with a flow of 3,400,000 cubic ft. of gas a day and at present is shut in. Location is three-quarters of a mile from nearest production. The McCune gas sand was topped at 4770 ft., with base at 4800 ft.

Isleton Try Digs

On Sec. 14-5n-3e in the Isleton area of Solano County, Texas Company's Ryer Island Comm. No. 3 continues to drill inquisitively deeper at 4000 ft. In the Petaluma area, Sonoma County, Santa Rosa Exploration Company is scheduled to carry deeper from 5790 ft. the Stephens-Rohnert No. 1 wildcat on Sec. 26-6n-8w.

Coyote Creek Wildcat Quits

The Coyote Creek area of Ventura County failed to reward Sunray Oil's drilling effort with petroleum. The wildcat, Dunshee-One No. 1 on Sec. 26-4n-24w, explored to an unproductive depth of 7160 ft. In the Cat Canyon field, Santa Barbara County, Sunray's Dominion No. 58-23 on Sec. 23-9n-33w is digging at 1540 ft.

Butte County Leases Taken

Stimulated by Honolulu and Humble's success in uncovering new natural gas supplies in the Princeton area of Butte County, major operators are taking leases available in several counties in Northern California. Union Oil Company has acquired a total of more than 35,000 acres near the towns of Colusa and Grimes. Other participants in the lease campaign, in addition to Honolulu and Humble, are Richfield, Standard and Shell.

Tapo Canyon Acres Leased

Aeco Corporation of Beverly Hills has acquired an 800-acre lease in portions of Secs. 13, 14 and 15-3n-18w in the Tapo Canyon area of Ventura County. The property is on the Oak Ridge Anticline, whose highs contain fields at Bardsdale and Shiells Canyon. Less than one-half mile north of the Aeco land, Union Oil Company's Simi No. 15 on Sec. 11-3n-18 at Simi is coring at 4800 ft. Simi No. 16 on section is bailing from 1500 ft., with casing cemented at 960 ft.

Santa Cruz Test Staked

Union Oil Company is ready to begin work on Teresa Hihn No. 2 on Sec. 34-10s-1e in the Santa Cruz area of Santa Cruz County. Location is not far from the No. 1 wildcat, which quit some weeks ago at a dusty 7745 ft. Los Nietos Company's Holy City No. 1 on Sec. 9-9s-1w at Moody Gulch in Santa Clara County is redrilling at 2100 ft., after going originally to 4659 ft. and plugging back for a new start at 1285 ft. Texas Company's Steele No. 1, a wildcat on Sec. 36-7s-5w in the Pecadero area, San Mateo County, is making hole ahead at 6710 ft.

Cold war economic and military problems will be the chief topic of discussion when President Truman and British Prime Minister Churchill begin a vital seven-day conference in Washington on January 3.

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San Luis Obispo Wildcats Working

At San Luis Obispo County's Gonyer Anticline in the Hovey Hills area, Robert S. Lytle's Dougherty No. 1 wildcat on Sec. 6-11n-24w is continuing its downward journey at 8510 ft. Six miles west of the town of Simmler, Shell Oil Company is running a series of tests uphole with its McDonald Estate No. 38-20 on Sec. 30-29s-18e. The well went to a total depth of 11,684 ft. and is the deepest hole ever drilled in the area for miles around. On the Sumner Ranch, Texaco's Santa Margarita Land & Cattle Company NCT-One No. 1 on Sec. 2-32s-19e is drilling at 8720 ft. Near Barrett Creek, the company's SMLCC NCT-Two No. 1 on Sec. 5-32s-19e is digging at 2960 ft. M. S. Martin's Sousa No. 1 wildcat on Sec. 9-30s-11e at Morro Bay suspended drilling at 710 ft.

Gould Hills Try Calendared

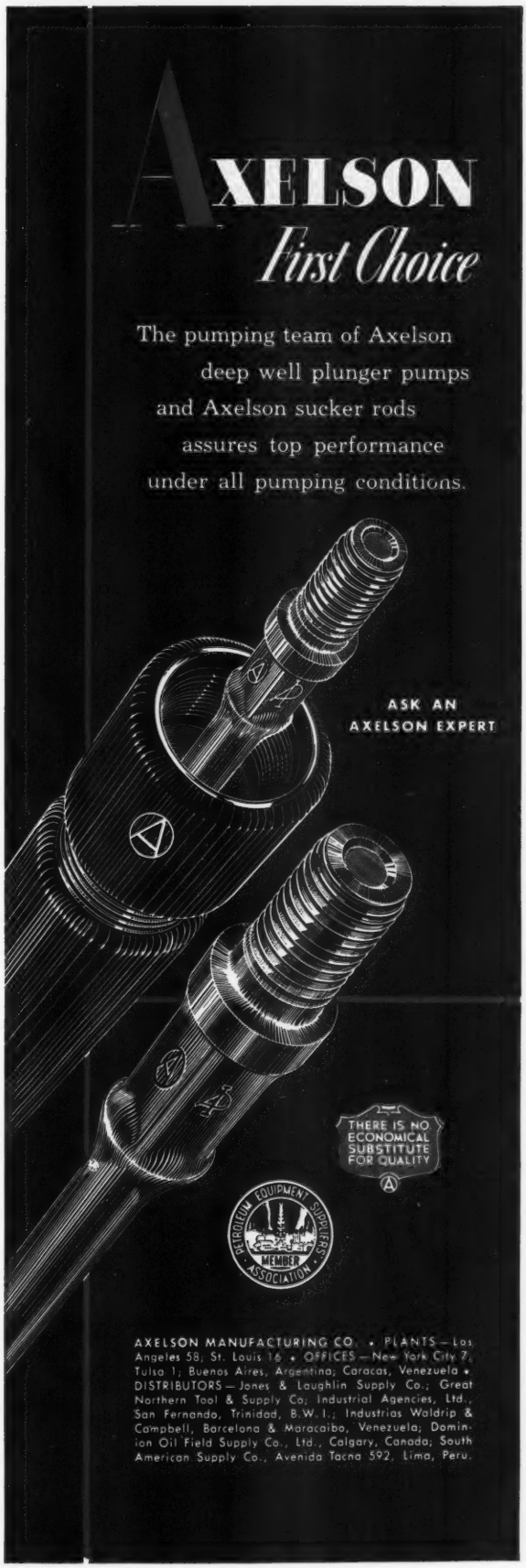
Near Gould Hills and two miles northwest of Salt Creek, Beloil Corporation, Ltd., is preparing to drill its Beloil-Bacon Hills No. 1 on Sec. 12-29s-20e, Kern County. In the Bena area, Golden Dome Oil Company, Inc., at last reports was poking ahead below 2000 ft. with Tejon Ranch No. 13-1 on Sec. 13-30s-30e.

Rio Bravo Test Waits

Awaiting rig describes the present operational stage of the Stansbury, Inc., Mann No. 1 test on Sec. 21-28s-25e in the Rio Bravo area. About to spud is L. R. Wilhite's Williams No. 1 wildcat on Sec. 2-30s-21e in the Cymric area.

Wheeler Ridge Test Rigging Up

Seeking an extension of production in the Wheeler Ridge field, Richfield Oil is preparing to begin drilling its KCL-D No. 85-29 on Sec. 29-11n-20w. Location is a dozen hundred feet south of the field and location is on property of the Kern County Land Company. At this writing, the company's Shaw No. M-1 in the Chico-Martinez area is a location on Sec. 34-28s-20e.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San Joaquin Valley

Pleito Creek Test Working

Humble Oil'c KCL-B No. 3 on Sec. 35-11n-21w at Pleito Creek in Kern County is engaged in cleanout operations. The project is bottomed at 4053 ft. and 8⅝-in. casing is set one foot above. Location for KCL-B No. 6 has been made on the same section. At last reports the company's Kirschenmann No. 1 on Sec. 27-30s-29e at East Mountain View was pumping wash oil.

Elk Hills Test Hits Record Depth

Standard of California evidently scored a new depth record for the Elk Hills field with its UONPR No. X55-30R deep test on Sec. 30-30s-23e, west of Bakersfield. The project stopped at 12,856 ft. and is in the proper shape for a series of trials uphole. Formation tests conducted early this year of the Carneros zone were encouraging and redolent with promise. Opening of new and hitherto untapped zones at Elk Hills might significantly affect the near by Coles Levee and Buena Vista Hills fields. In the latter field Standard is drilling at 8790 ft. with its No. 552-27B on Sec. 27-31s-23e.

Edison Job Starts Soon

In line for drilling in the near future is Lyle A. Garner & Associates' George No. 1 on Sec. 31-29s-29e on a lease of 144 acres in the Edison area. All possible zones to the Vedder will be interrogated. Golden Gate Petroleum Company of San Francisco and United Exploration Company of California, a Bakersfield concern, have abandoned Mettler No. 1 wildcat on Sec. 25-30s-29e. A depth of 2457 ft. told the full story.

Cuyama Valley Wildcats Drill

Richfield Oil's Adams U.S. No. 1 wildcat in Cuyama Valley, Sec. 27-8n-24w, Ventura County, is drilling and coring below 3800 ft. J. G. James No. 1, Sec. 9-9n-26w, Santa Barbara County, is drilling at 10,998 ft. Russell No. C-3, Sec. 2-10n-26w, is drilling and spot coring at 10,490 ft. The latter is in the San Luis Obispo County part of Cuyama Valley.

Tejon Ranch Try Promising

Reserve Oil & Gas Company of San Francisco is in the completion stage with its Reserve-Pauley No. 58-33 well on Sec. 33-11n-19w in the central portion of the historic Tejon Ranch. On test of the interval of 4835 ft. and bottom at 4893 ft. the well produced natural gas at the rate of 4,000,000 cubic ft. daily from the Valv zone. It appears that this is the first test of the zone in the sector. Casing has been cemented at 4725 ft. and concensus of trials run indicated a potential of some 10,000,000 cubic ft. daily. Reserve is the holder of several thousand acres in the area. In the Tejon Hills, Mitchell G. Kovaleski is digging at 650 ft. with his Kova-Thun No. 1 test on Sec. 15-11n-18w. Tejon Exploration Company aband-

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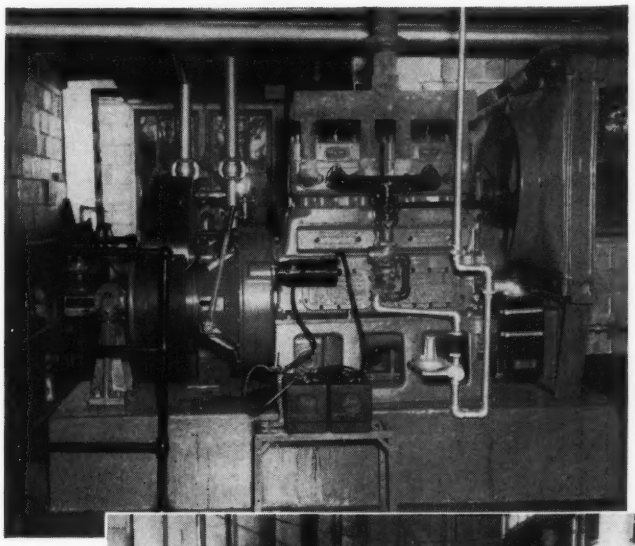

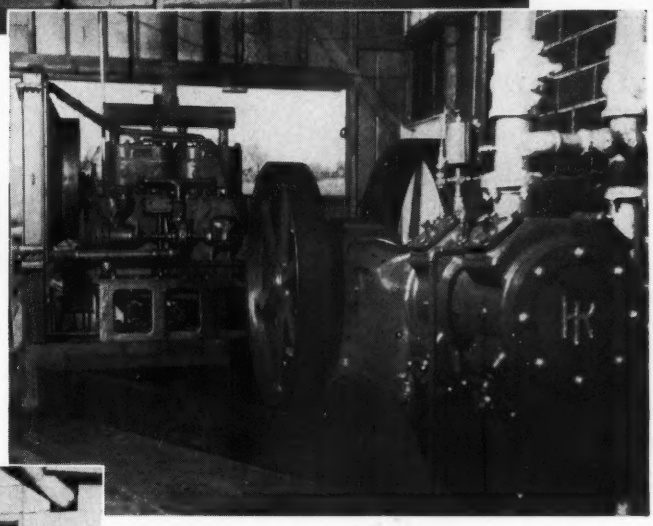

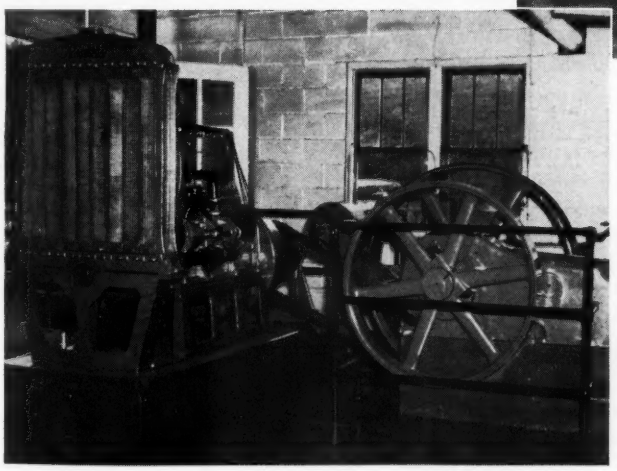

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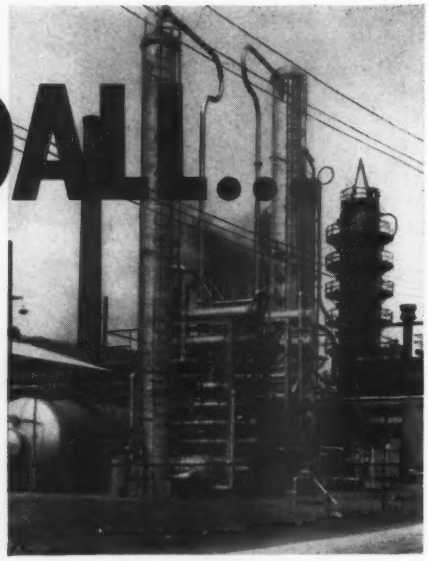

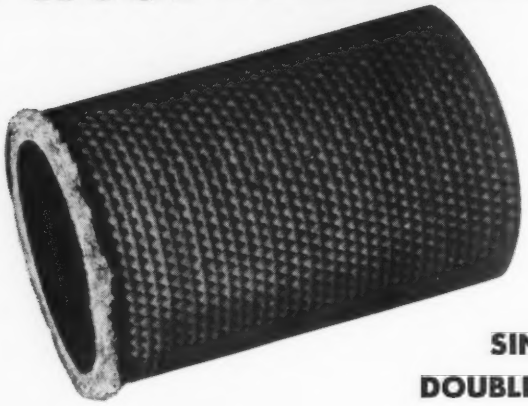

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oned No. 66-21 on Sec. 21-11n-19w at 6750 ft. East of Tejon Hills, Max N. Hammerling is preparing to deepen from 926 ft. the former Harp & Brown Tejon Ranch No. 1 well on Sec. 23-11n-18w.

Round Mountain Try Completing

Drilled to a bottom of 2600 ft. and then plugged back to 2267 ft., DeWitt Langford is completing his Bishop No. 1 wildcat on Sec. 24-28s-28e in the Round Mountain area.

Kern River Test Drills

West of the Kern River field, Standard Oil's No. 33-1 test on Sec. 1-29s-27e is making hole below 1900 ft. The venture is slated as a basement test. On the next Sec. 2-29s-27e, John H. Marion of Huntington Beach has abandoned his Schneider No. 1 at 2555 ft. in gray sand. Seaboard Oil's Seaboard No. 27-22 on Sec. 22-28s-28e top gray Vedder sand at 3280 ft. and the well was written off at a total depth of 3334 ft.

Salt Creek Test Stops

After drilling to a total depth of 2887 ft., Independent Exploration Company has suspended operations with its Roco No. 16 on Sec. 18-29s-21e at Salt Creek. Western Petroleum's Ferguson-Western No. 45 wildcat on Sec. 30-29s-21e has given up the search for oil at 1004 ft. On the same section and also dry was Ferguson & Bosworth's Morton-Ashe No. 2, which quit at 790 ft.

Goose Slough Wildcat Deep

Drilling is continuing ahead below 10,200 ft. in Western Gulf Oil Company's McAlpine Comm. No. 57-17 wildcat on Sec. 17-29s-25e at Goose Slough in Kern County. Texas Company's KCL-Goosloo No. 1 test on Sec. 20-29s-25e is making hole ahead at 6330 ft.

Strand Wildcat Drilling Ahead

North of the Strand field, Texas Company's KCL-Strand No. 1 test on Sec. 1-30s-25e is digging steadily ahead at 8175 ft. At Blackwells Corner, the company's Occidental NCT-

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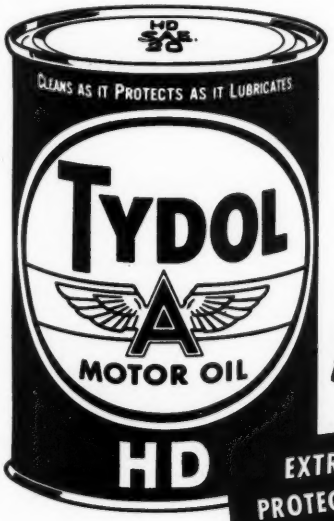

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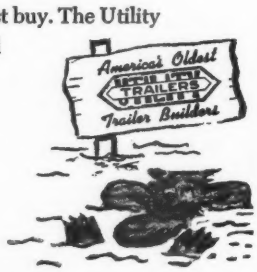
In the selection of the equipment for this job, the Thomas P. Pike Drilling Company, one of the leading drilling contractors in the West, decided on UTILITY Trailers. They knew from past experience that these rugged units would give them the dependable, trouble free, low cost operation they had to have in this isolated region.

You too, will find that Utility Trailers are your best buy. The Utility representative near you (they are located in all principal Western Cities) will give you detailed information on the many exclusive, money saving features and outstanding developments, only Utility Trailers provide.



UTILITY TRAILER MANUFACTURING CO.

LOS ANGELES • CALIFORNIA

One No. 1 on Sec. 8-27s-20e is drilling at 11,140 ft. Texaco's new Kern Valley Farms well on Sec. 15-31s-29e north of Arvin currently is putting out 12 barrels of 34 gravity oil daily from 6452 ft.

San Emidio Test Drills

In the San Emidio Rancho area of Kern County, Richfield Oil is drilling below 1000 ft. with its San Emidio No. A-34-27 on Sec. 27-11n-22w. The well is six or seven miles east and a little south of the Midway-Sunset field, no great distance from a dry hole recently put down by the company in the area. It is also about 1000 ft. northwest of Continental Oil's KCL No. M-1, which was given up in 1947. Western Gulf's KCL-Rock Pitt No. 83-12 on Sec. 12-11n-22w is digging deeper at 12,050 ft.

McDonald Well To Go Deeper

Murphy Bros. is ready to deepen its MST-Theta No. 2 on Sec. 2-28s-19e, two miles northwest of the McDonald Anticline field in Kern County. The well was abandoned last June at a depth of 5566 ft. and present plans call for carrying the hole on down for a test of Eocene sand.

Jacalitos Test Works

It won't be very many days until the drill starts in Oceanic Oil Company's Standard-Caribou No. 47X-32 in Sec. 32-21s-16e. The project will aim for production in the Leda sand, the main producing zone in the Guijarral Hills field, about nine miles to the northeast. Oceanic's well is on a 380-acre farmout from Standard of California and a short distance north and west from Texas Company's Ferguson No. 1, which was abandoned almost 10 years ago at 7215 ft.

Montana's Valley County in the Williston Basin is the scene of a recent Oceanic acquisition of mineral rights on 49,000 acres of Government land. The property is in the northwest part of the Basin, 30 miles southeast from the Bowdoin gas field and 80 miles northwest of Shell Oil's important Richey discovery.

Personalities IN THE NEWS

BS&B Open Los Angeles Office

Mr. Henry A. Ruysser, Jr., Vice President and General Sales Manager of Black, Sivalls & Bryson, Inc., Kansas City has announced the opening of a BS&B Los Angeles office.

Ross Baze

Mr. Ross Baze, named west coast Sales Manager, will be in charge of the Los Angeles Sales Office. Offices are located at 1274 La Brea Avenue, Telephone Webster 1-1755. They will handle the complete BS&B line of oilfield products, Safety Heads and BS&B Climax Controls.

Baze, after graduating from the University of California with a degree in Architecture, held a post in the University Engineer's office. Later, he worked with the Pacific Telephone and Telegraph Company as a specification engineer, also spent two years with the Sinclair Prairie Oil Company designing plant layout and facilities.

From December, 1942 to June 1944, he served in the United States Army as an Assistant Regimental Engineer Officer and Assistant District Engineer of the Persian Gulf Command. When discharged, Baze joined Hanlon-Waters as Service Engineer in their south Louisiana district, where he was soon promoted to Senior Salesman and finally District Manager of the territory.

In 1948, he was transferred to Tulsa, his birthplace, as Assistant Sales Manager of the Climax Controls Division of Climax Industries, which had taken over Hanlon-Waters. Later, after Black, Sivalls & Bryson bought Climax Industries, Baze was appointed Sales Manager of its Climax Control Division.

Mr. Bill Lacy, Sales Engineer, will assist Ross Baze in the Los Angeles Sales Office.

Les Worden, who is aiding the construction of the gas pipeline from Texas for the Southern California Gas Company, has returned to Blythe, following a vacation in Phoenix, Ariz. On the return trip he came by way of Parker to be in attendance at the big Indian pow-wow and rodeo.

George W. Rochester, widely known Los Angeles attorney, has widened his business interests by acquiring approximately 17,000 acres in Chavez and Sierra Counties, N. M. During his college days, Rochester held the heavyweight championship at Cornell.

On an extended vacation in old Mexico is Fred H. Hammer, a leading California lease and landman. Before returning to the United States, Hammer plans to mix business with pleasure by looking over prospective oil land south of the border. Hammer's daughter and son-in-law, Mr. and Mrs. Karl P. Doerr, are residents of Mexico City.

George W. Hart has been named manager of Shell Oil Company's marketing district at Wilmington. He succeeded Alton P. Hynes, who was transferred to the company's San Francisco division.

Sievers Company Opens New Office

Bill Sievers, president of the Sievers Company, exclusive distributors for KINGSEAL and specializing in lost circulation problems, announces the appointment of Gus Carey as manager of their new West Texas office.

Gus Carey

Mr. Carey was formerly with Reed Roller Bit Company in West Texas, has had many years experience in the oil business and is especially well qualified to handle lost circulation problems.

It is stated by the Sievers Company that KINGSEAL used in conjunction with their new device will accurately sum up the problem of lost circulation.

Gus Carey will headquarter at Odessa, Texas, and can be reached by phone at Odessa 6-3682; night phone Odessa 2-2290 or Texas Warehouse, Odessa, Texas.

From Los Angeles to Casper, Wyo., has gone genial Harvey L. Garland, production and drilling engineer for Seaboard Oil Company.

"What have I got to lose if they break you up?"

Aside from any question of fairness, *people wonder how they'll be affected personally if the Anti-trust lawyers succeed in cutting big companies into smaller ones. We hear such comments as, "What have I got to lose if they break you up?"*

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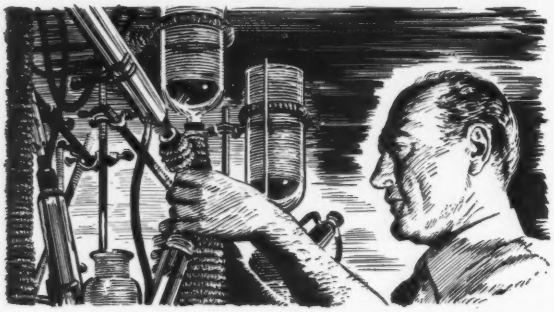

New products and improvements in old ones flow steadily from our laboratories—new gasolines and oils, raw materials for new fabrics, "soapless soaps"; other modern miracles. You may take such progress for granted. But Standard has put some 40 million dollars into research since 1940. We can't go on this way if they break us up.

Motorists get the finest service at Western gas stations; Standard led the way. Our technical counsel helps many industries cut production costs of goods you buy. We've pioneered in taking needed petroleum products into undeveloped farm and frontier areas. We can't give these services if we're forced to be small.

You are assured of ample supplies of petroleum products at reasonable prices. Standard is constantly seeking out new crude oil reserves in this country and abroad. This sometimes costs millions before the first gallon is found. We can do jobs this big, which benefit you as well as the country, only by being integrated.

America's military strength depends heavily on industry. Our fighting men are backed by *the world's greatest* production capacity. Should it now be *limited* by breaking up big companies? We are at work for our Government on atomic research, synthetic rubber, aviation gasolines, other jobs. We believe we perform them *best* by being *big.*

You have a lot to lose if they break us up. As a big, integrated company, Standard is able to operate more efficiently in serving you and helping to make America strong.

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• plans ahead to serve you better

Sam A. Callison, of Sunray's valley production branch, has been transferred from Coalinga to Fellows. He now resides in Derby Acres.

Sad news for his many friends is the serious illness of Louis Chappuis, one of California's best known petroleum engineers and geologists. Louis is a patient at the Veterans' Hospital at Sawtelle, where specialists have diagnosed his ailment as cancer of the larynx.

Pioneer Oilman Victor H. York has been chosen seventh member of the Los Angeles County Regional Planning Commission. York, who was named for a four-year term, has long been prominent in oil, civic and philanthropic activities.

The central division of Signal Oil Company recently held its first employee picnic at the Rod and Gun Club in Richmond. Chairman of the picnic planning commission was Bob Mumford. He was assisted by Louis De Luca, Vic Ahlport, Thomas Petrocelli, Ahna Watson, Marguerite Christie, Emily Mery, Ramona Froisland, Mildred Ford, Betty Kreidler, Art Benson and Jim Marshall. More than 350 persons were in attendance.

George H. Ennis, who is credited with devising a method whereby the point of water entry in oil wells could be accurately determined, died at Long Beach. Sixty-eight at the time of his passing, Ennis headed the Oil Well Water Locating Company at the beach city.

J. P. Gould, chief engineer of drilling and production and assistant to the deputy general manager of Iraq, was a guest speaker at a recent gathering of the Los Angeles Breakfast Club. He expressed some irritation because the U. S. Government keeps sending money to countries in the Middle East. "They don't want money," he said, "they want tools, something, anything to work with."

Fred Manning, oil producer and contractor driller, is enjoying the salubrious climate at Palm Springs. He is residing at Wonder Palms there for the winter.

Magician Mystifies Nomads At November Shindig

Harry Mendoza, a modern Merlin, teacher of magic to the Stars, provided some feats of magic and sleight-of-hand tricks that completely fooled those attending the November 14th Nomads meeting at the Jonathan Club. With magic rings, disappearing eggs, self-mending rope, and other aids guaranteed to mystify an audience—Mendoza put on an outstanding show.

Music during dinner was provided by an attractive feminine accordionist—an excellent vocalist as well as one who could bring the old time tunes out of a music box.

Earl Rees presided in the absence of Jerry Engstrand. Entertainment was arranged by Jim Hughes, Sergeant-at-Arms.

Front Row: Juan Pedretti, Union Oil Co. of California; Elmer E. Jones, British Oil Corp., Venezuela; E. J. Radous, Shell Caribbean Petroleum Co.; Buck Devine, Iraq Petroleum Corp.; R. R. G. Rivington, Asiatic Petroleum Corp.

Back Row: Russell Keener, Petro Tech Service Co.; Geo. Tolmachoff, National Supply Co. of Venezuela; Arnoldo Rojos, Empresa Nacional del Petroleo, Chile; Mario Infante, Empresa Nacional del Petroleo, Chile; Roberto Blackwood, Empresa Nacional del Petroleo, Chile; J. W. Clampitt, Iraq Petroleum Co.; John M. Miner, Petro Tech Service Co.; H. G. "Beans" Rice, Bob Eiche and Associates, Venezuela and Colombia.

Not pictured: H. J. Kettenburg, Asiatic Petroleum Corp.; Ernest Smith, Socony Vacuum Oil; Mike H. Bush, Southeastern de Mexico.

Standard Oil of California's G. Stewart Brown was elected vice chairman of the West Coast of the Oil Industry Information Committee. He succeeded C. Haines Finnell, Union Oil Company. Charles Z. Hardwick, vice president for marketing of Ohio Oil Company, was named national chairman, succeeding John Dupree. The company plans one quarterly meeting next year on the Pacific Coast in San Francisco on May 19.

Thomas Dunlop, Jr., Shell Oil's manager of lubricants at Los Angeles, is back at his desk after attending a conference in New York. Managers from all sections of the country participated in discussions on efforts to maintain adequate supplies of lubricating oils and greases needed for defense.

E. E. "Ernie" Pyles, vice president of Jergins Oil Company has just been elected a director, according to an announcement made recently, by Lowell Stanley, chairman of the board. Pyles is recognized throughout the oil areas of the United States as a forceful and effective crusader for petroleum industry causes and has long campaigned vigorously for states ownership of tidelands and retention of the oil depletion allowance. He is a former president of Southwest Exploration Company; is currently a member of the Military Petroleum Advisory Board and the National Petroleum Council.

Rocky Mountain NEWS

Colorado—Idaho—Montana—New Mexico—Utah—Wyoming—Western Canada

The big sedimentary basins of the Rocky mountain region continue to attract the nationwide interest of oil operators and pointed to vast new potentials of petroleum reserves to be developed in the years ahead.

On the western, or Montana side of the vast Williston Basin, Shell Oil Co.'s No. 1 Northern Pacific well near Richey, Mont., flowed 1656 bbls. 38 gravity crude oil in the first 24 hours of production testing—establishing a gauge markedly above the average for Rocky mountain discoveries.

Stanolind Oil and Gas Co. pushed oil production 30 miles north along the west side of Wyoming's Powder River Basin, with an important Tensleep discovery six miles north of the town of Kaycee. The whole area north of the Sussex-Meadow Creek fields is in a state of ferment.

Down in Utah's big Uintah Basin, Carter Oil tested the Mesa Verde (Upper Cretaceous) for good oil shows in the Willow Creek wildcat, reviving interest in this formation as a new oil producing horizon in the region.

Drilling pace continued high in the Julesburg Basin of western Nebraska, northeastern Colorado and eastern Wyoming, while interest remained keen in the San Juan Basin of northern New Mexico.

But it was in the Williston Basin of North Dakota and eastern Montana that the oil fever mounted the highest. Shell's J. E. Clark, Rocky mountain division manager for the company, placed the production interval in the Richey wildcat in limestone of Mississippian age, between 7183-7275 ft. It was identified by geologists as the Charles formation. Flow of oil was accompanied by a substantial water volume and further production tests are awaited with keen interest.

Meanwhile Shell staked location for a diagonal offset and made tentative plans for four other wells in the immediate area. The contractor, McConnell Drilling Co., began moving all of his equipment into the area from former headquarters at Farmington, N. M. His new headquarters will be at Bismark, N. D.

Shell and other operators plan sizable drilling programs in the big Basin during the coming year.

Prices for acreage continue high in the vicinity of new Montana and North Dakota strikes, with some as high as $400 per acre. Other more moderate prices of $50 to $100 per acre are reported in the area of discoveries.

Pipeline firms are preparing to move the crude from the Williston Basin as rapidly as production develops. Stanolind Crude Oil Purchasing has offered to buy crude from the general Nesson fields and Service Pipe Line will build a 14-mile gathering system in the area. A new refinery at Fargo, N. D., is in the rumor stage.

Other operators are winning stakes in the big Basin area. The Texas Co. logged 200 ft. of saturation at its wildcat on the long Baker-Glendive wildcat in eastern Montana. The well (No. 1 Northern Pacific-B) is located between Shell's Richey discovery and Pine Area wildcat. In the best recovery reported, the well made 3800 ft. of 38 gravity, black oil (sweet) in a two-hour test of a 50 ft. interval. It is the most promising test to date on the 75-mile long anticline, which previously yielded oil shows in the Ordovician but no commercial producers.

Shell is testing its Pine Unit wildcat at 9746 ft., after recovering oil shows in the Ordovician. C. H. Murphy's East Poplar wildcat in Roosevelt county, Mont., 75 miles north of the Texas Co.'s Cedar Creek, flowed sulfur water, slightly cut with mud, gas and oil.

In Fallon county, Mont., Texas Pacific Coal & Oil and Pure Oil had an apparent failure at the No. 1 Cox on the Plevna anticline, a venture which went to Cambrian at 9850 without shows. Thus far it is the only wildcat in the Montana and North Dakota portions of the Williston Basin to reach critical depths without shows. Recently Shell's wildcat in Perkins county, S. D., was a failure.

With severe northern winter fast closing in on the plains of North Dakota, there were still 11 rigs actively drilling in early December. One of these was working over the initial discovery in North Dakota (Amerada's No. 1 Iverson), while three others were starting on development wells in the general Beaver Lodge area for Amerada. Other activity in North Dakota is reported in Williams, McKenzie, Bottineau, Emmons and McHenry counties.

In Wyoming, Stanolind's Kaycee discovery set off a wave of hot leasing activity along the west side of the Powder River Basin, extending north from the Sussex-Meadow Creek fields. Continental, which opened the Sussex-Meadow Creek pools, has a 22 percent interest in the Stanolind strike. The venture cut 255 ft. of Tensleep saturation before finding the water contact and company spokesmen estimated reserves might run above 10 million bbls. Carter Oil lost no time in staking another wildcat 12 miles northwest in the Steel Creek sector of Johnson county, and several farmout deals were reported in the making throughout the area.

A group of independents headed by Frank H. Gower of Denver farmed out the Burris Dome prospect from Bay Petroleum for three Shannon sand tests 17 miles east of the Stanolind Kaycee discovery. The Shannon is productive as one of four oil horizons at Sussex-Meadow Creek. Sun Oil Co. is moving in geophysical crews for evaluation of other prospects in the next two townships north of Stanolind's discovery. Other interested op-

erators include R. L. Manning, Trigood Oil, Conoco, Los Nietos and Sinclair.

The entire west side of the Powder River Basin has been active since discovery and rapid development of the Sussex pools started two years ago, reaching the point where production is on a par with the old Salt Creek field of north-central Wyoming.

Elsewhere in Wyoming, the Husky Oil-Wilshire venture in the Five-Mile sector of Big Horn county was drilling below 11,000 ft. in the Red Beds on the way to check on Embar-Tensleep possibilities below 12,000. It ranks as one of the most important tests in the deep portion of the Big Horn Basin, which already has produced such outstanding pools as the Worland and Slick Creek fields. Gas shows were reported in the Dakota sand on the way down, lending encouragement to hopes of deep Embar or Tensleep production.

An edge well was staked at the prolific Bonanza pool in Big Horn county. Litigation may delay sale of the Bonanza Oil Co. to a group of Texas independents, recently announced by Dr. Victor Ziegler, head of the firm. The sale price had been reported at approximately $20,000,000—with 930,000 shares of the company sold for $19.75 a share. Bonanza Oil opened the pool early this year, and it has ranked as one of the most active drilling locales in the state this year.

In the second deepest well ever drilled in the state, Pure Oil Co.'s No. 3 at West Poison Spider near Casper prepared to run casing at a total depth of 15,990 ft. to test shows in the Dakota-Lakota series. If successful, the well would become the world's deepest producer. Three years ago, Pure established record depth production at West Poison Spider with a Frontier (Upper Cretaceous) producer at 14,309 ft. This depth record was later surpassed in Louisiana. The current test was deepened from below 10,000 ft. in the Mesa Verde, a higher Upper Cretaceous sand.

The Julesburg Basin turned up four new wildcats in Colorado early in December. California Co. made its first Basin venture with the No. 1 Union Pacific west of Nunn in Weld county, about 14 miles from production in the Ft. Collins area. In Morgan county, George & Wrather made location for a 6500 ft. test in section 2-1n-55w. Lario Oil & Gas staked the three miles northeast of the Merino pool. A Tulsa independent, H. C. Arnold, will drill at East Sand Creek, west of the Atwood pool.

In Nebraska, Ohio Oil is offsetting the Gulf discovery north of Sidney, and Ryan has announced a wildcat in the Reimer area of the same county, about one mile north of production. Wytex and Derby have made an offset location to their "D" sand discovery in the Kimball area.

Continental Oil Co.'s venture in Sioux county tested water in the Muddy sand following failures in No. 1 Berrick in Logan county, some deeper horizons, and may be abandoned at the plug back depth of 5733.

Not to be overlooked was Utah's Uintah Basin, where Carter Oil recovered 270 ft. of free, 40.9 gravity oil in a four-hour drillstem test of a Mesa Verde sand between 8176-8195 ft. The well, No. 1 Unit in section 21-11s-21e, is 30 miles southwest of the Bonanza area where the Roy Johnson venture found gas shows in the Mesa Verde recently. The Carter well cut some 1800 ft. of the formation in the venture, which was first scheduled to test the deeper Green River formation.

Discoveries in the Basal Green River (Eocene) fractured shale zone at Red Wash and Duchesne have maintained high interest in the Uintah Basin this year, and recent extensions at the Roosevelt Pool indicate possible production over an eight-mile belt.

Despite heavy drilling and completion costs in the Uintah Basin, oil executives plan extensive operations for another year. A major wildcat and development program is anticipated, with heavy budgets already announced by Carter, California, Gulf, Stanolind, Continental and others.

Elsewhere in Utah, Shell Oil's Bluff Unit wildcat in San Juan county flowed four million cubic ft. of carbon dioxide gas daily, with a spray of condensate. This followed acid treatment of a Mississippian zone 7520-7536 ft. The venture in southeastern Utah went to 8762 ft. and was plugged back to test the Mississippian. Other zones will be tested through perforated casing.

Down in northern New Mexico, Lowery et al (successors to the late Thomas Doswell at South Largo) are completing the No. 4-13-132 Doswell in section 9-26n-6w. It is the second Tocito well in the South Largo pool of Rio Arriba county, topping the formation at 6676 ft. and swabbing 184 bbls. oil in 14 hours. Estimates rate the well at near 500 bbls. per day on completion. The discovery, one-half mile south, flowed 32 bbls. oil per hour from the Tocito.

In the personal news of the region, the Intermountain Association of Petroleum Geologists named Graham S. Campbell, Phillips executive at Salt Lake City, as president for the coming year. Other officers named at the annual meeting in Temple Square Hotel are Irwin W. Clark, Standard of Cali-

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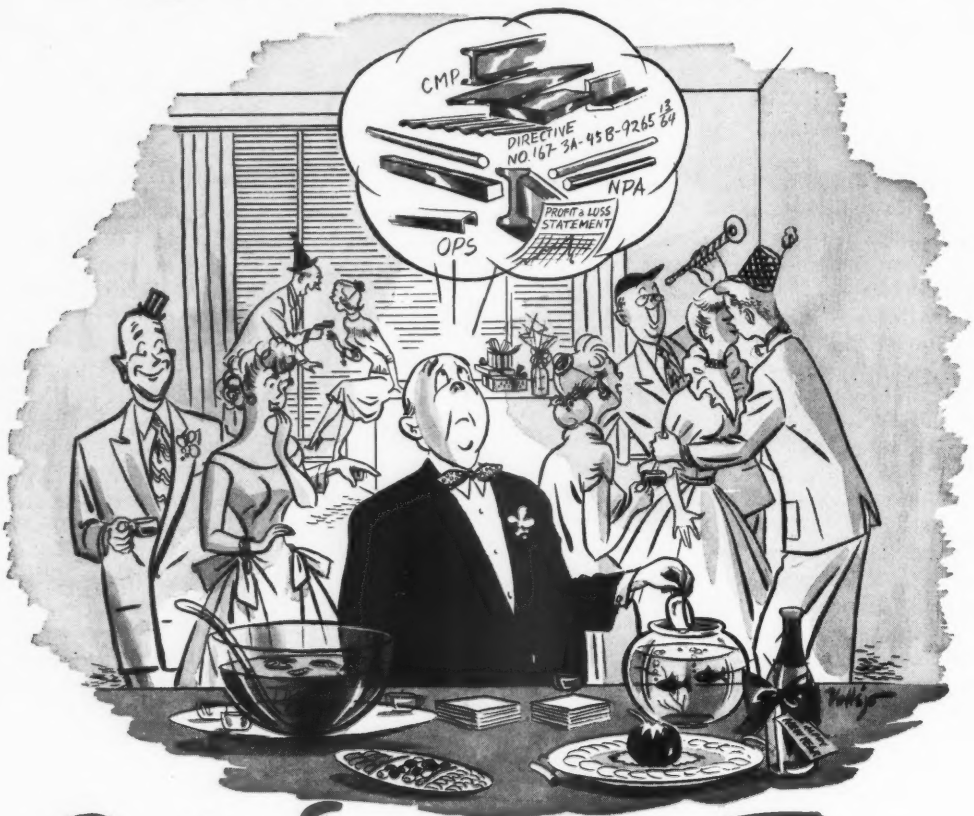

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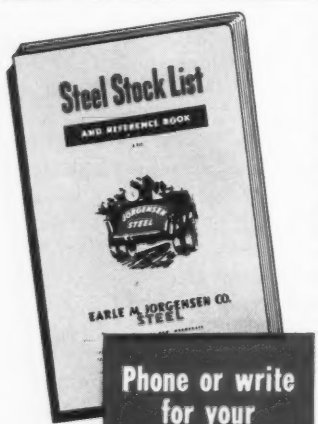

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fornia, vice president; J. R. Boshard of Sun Oil, treasurer, and Frank J. Adler of Phillips, secretary. The group meets each Monday at the Newhouse hotel in Salt Lake City for a luncheon, and visiting geologists are welcomed.

Geologists of the four-state San Juan region who make up the Four Corners Geological Society met at Durango Nov. 30 to hear Paul Weaver, technical assistant to the vice president of Gulf Oil, speak on "Evaporites and Tectonics of Salt Structures."

Frank A. Morgan of Richfield Oil, president of AAPG, spoke on the "Business of Oil Finding" at a meeting of the Rocky Mountain Association of Geologists at Denver Dec. 4. It was the annual election meeting for the group.

IPAA has awarded certificates of service to James Donoghue, Charles S. Hill, Gilbert J. Mueller and Warwick M. Downing of Denver for service to the industry and to the nation in work of the Independent Petroleum Association of America.

W. S. McCabe, Rocky mountain superintendent of exploration for Stanolind, stepped up to regional geologist for the Rockies and Canada. He was succeeded in Casper by J. C. Johnston. Ross W. Craig was promoted to division geologist.

Casper geologists heard an interesting lecture Dec. 5 by Dr. Lester C. King, professor of geology at the University of Natal in Durban, South Africa. He discussed the development and determination of the ages of plain lands, their multiplication under earth movements and correlation of the main plainlands of the world. Title of the address was "Continental Geomorphology."

A drilling wage conference was scheduled for Casper on Dec. 17. The conference was mapped in Denver recently by 30 representatives of the industry and wage stabilization board officials. The drilling industry will be represented at the meeting by contractors from Colorado, Wyoming, New Mexico, Utah, Nebraska, North and South Dakota, Idaho, Montana and Nevada.

Formerly of Los Angeles, Harvey L. Garland has been transferred to Casper by Seaboard Oil Co. Penn Gouldy and Wade Moore were named district geologists in Casper for Union Oil, and Jack W. Stackpole of Midland, Tex., was transferred to Casper as district landman for Lion Oil.

Reed Roller Bit opened new Rocky Mountain headquarters in Casper with much fanfare. B. F. Hanley, division manager, held open house for the oil fraternity in the newly remodeled building. Representatives of the company from the entire region attended the event. These included Omer Rodgers of Glenrock, Wyo.; Ben Culley of Williston, N. D.; J. F. McClure, Riverton; Clint Day, Rock Springs; Tom Childs, Farmington, N. M.; Frank Walters, Cody; Jimmy Young, Tulsa; Paul Steel, Edmonton; Denver Wolford, Calgary; Lloyd Larsen, Casper, and Rex Hambricker, Houston, vice president of the firm.

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Superior Awarded Arabian Oil Rights

Oil rights in the continental shelf along a portion of the Arabian-Persian Gulf coast were won by Superior Oil Company of California in an arbitration award announced in London. The section involved is off the coast of Abu Dhabi, a principality in Arabia governed by Sheikh Shakbut Bin Sultan Bin Za-id. Petroleum Development, associated with Iraq Petroleum Company, a British firm, claimed that a 1939 concession took in part of the same area in which the Sheik authorized a concession last year to Superior Oil. The arbitration umpire, who heard arguments in Paris last August, ruled the concession to Petroleum Development includes the subsoil of the territorial waters, but not the subsoil of the continental shelf. Dispatches from London said the shelf area was defined as the submarine area adjoining Abu Dhabi, but outside the territorial zone.

Fruitvale Try Listed

Norbel Oil Company is preparing to launch a try for a one-quarter-mile northerly extension test of the Fruitvale field on Sec. 14-29s-27e and called Ansolabehere No. 1. The well will work between a brace of dusters drilled some years ago by Western Gulf. Bakersfield Oil Company's Hill No. 1 on Sec. 28-29s-27e has been completed at 4360 ft. pumping at an unestimated rate. The Middle Kernco formation was topped at 4330 ft.

R. M. Pyles Boys And Girls Camp

Extension of the camp period from 8 days to a full 2 weeks for each boy attending the R. M. Pyles Boys and Girls Camp was voted unanimously for the 1952 season at a recent meeting of the Board of Directors, according to an announcement recently by R. M. Pyles, president.

Further, the Board elected to ask juvenile authorities in Southern California communities to invite 240 underprivileged boys to take the outing next summer. To accomplish this ambitious goal will require a budget of $15,000, according to Pyles, or $3,000 more than was spent this year.

The R. M. Pyles camp project now encompasses 3 camps for underprivileged children between the ages of 12 and 16, furnishing the boys an all-expense-paid outing that features the best of food, clothing if needed, horseback riding, fishing with equipment provided, counseling service, a swimming pool, handicraft shop, and various outdoor sports.

A report to the Board for the current year showed a total expenditure of $12,103.17, which permitted 234 boys a one-week's vacation in the mountain camp. Biggest item in the 1951 budget was for food, and if the youngsters continue their mountain appetites (some of them gain as much as 10 pounds in a week), food will probably continue to head the list of expenses.

This unselfish project to help boys who would not otherwise have an opportunity to get away from city streets during the summer, has been going on since 1949 under the exclusive sponsorship of the oil industry. It is supported solely by those engaged in some phase of the petroleum business, and has resulted in providing more than 600 boys with summer vacations in the High Sierras during the past 3 years.

Camp life is not all play for these boys. They have their daily chores as well as outdoor gatherings under the big trees to learn handicrafts, sportsmanship, leadership, and what they like best, horseback riding. The boys wash their own clothes, keep their tents clean, and take their turn serving in the mess hall and working in the kitchen.

The project began as a hobby of oilman R. M. Pyles early in 1949. Since then, it has attracted widespread support from hundreds of Californians engaged in the petroleum business.

The organization's selection committee appointed by the Board of Directors will start soon meeting with public officials authorized to care for underprivileged boys in various Southern California communities. Through these meetings, boys between the ages of 12 and 16 are selected to receive a summer expense-paid vacation. By this careful system of selection, only those boys are chosen who would not otherwise have an opportunity for such an outing.

Aside from four professional camp leaders, all other services at the camp are provided by members of the oil industry. The project is so carefully guided by Mr. Pyles and the Directors that 100 per cent of every dollar donated is used to the direct advantage of an underprivileged youngster.

It is an organization that lives up to its motto: "Dedicated to the task of building healthier and happier generations of Americans firmly endowed with the ideals and principles of our freedom-loving country."

Donations for the 1952 season are now being accepted by the R. M. Pyles Boys and Girls Camp, P. O. Box 191, Huntington Beach, California.

Freedom has a real and practical meaning here. Thanks to men of the petroleum industry in California, the Pyles Boys' and Girls' Camp has been able to give youngsters, for the past three summers, an opportunity they perhaps otherwise may never have enjoyed. Every morning in camp they stand at attention and pledge allegiance as the flag is raised. Each evening they sing "God Bless America" as the flag is lowered.

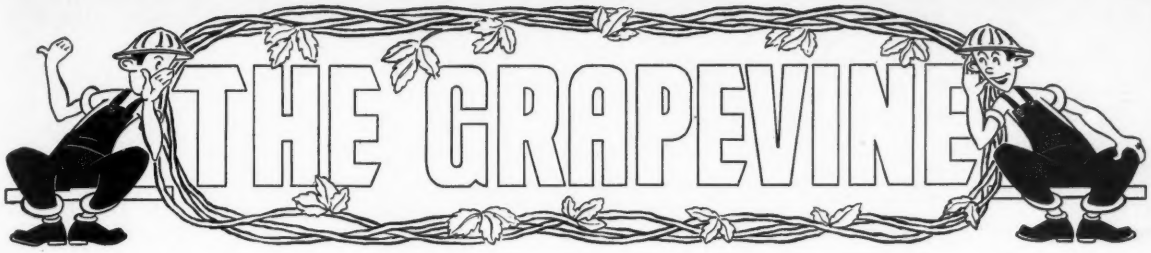
At a special Board meeting on October 31, 1951, Mr. Frank A. Morgan, vice president and manager of exploration, Richfield Oil Corporation, and Mr. L. L. Aubert, president of the Bankline Oil Company and The Norwalk Company, were appointed to the Board of Directors of the R. M. Pyles Boys and Girls Camp.

Placerita Test Idle

Idle at 1683 ft. was the last report on George Dexter's Wagner No. 2 test on Sec. 36-4n-16w at Placerita. At Placerita Canyon, Vincent J. Puccio and Carl Doshay's No. 1 on Sec. 3-3n-15w is coring below 900 ft.

Lancaster Try Drills

Seeking oil in the Lancaster district of Antelope Valley, H. W. Shaffer's Muntz No. 1 on Sec. 9-7n-14w is probing at 2800 ft. In the Dry Canyon area, H. P. Oates' Oates-Merritt-Annex No. 1 wildcat on Sec. 35-5n-16w is temporarily inactive at 2570 ft.



It was our good fortune a short while ago to be invited to lunch with some very distinguished followers of the sport of kings who for quite a number of years now have been putting all their dough on the same horse—a flyer, known as Pegasus. Not only that, but they have been cashing in regularly every month. The aforesaid luncheon meeting was convened at a well known hostelry, the Brown Derby, out Wilshire way and when we were fully assembled, besides your reporter there was another stag, to wit, Paul Whiteley, purchasing agent for General Petroleum Corporation, and definitely one of the chosen people; Art White, the western representative of Socony Paint Products, a delectable soul if we ever knew one, and his lovely lady, Aileen; and if we may coin an ingenious phrase "last but by no means least," our host and hostess for the day, from the borough of Metuchen, in the county of Middlesex, New Jersey, Frank Atkinson, recently appointed general sales manager for the Socony Paint Products Company, and his also very lovely helpmeet, Elaine.

One can well imagine if one has nothing else to do that such a power convention is bound to produce mighty interesting results, and that it did. In the short space of one hour, we arrived at definite conclusions about the paint situation, the weather, the paint situation, the Korean crisis, and the paint situation. We learned that Frank Atkinson is no relation to that other disciple of flying horsemanship, Tommy Atkinson, and that he and Elaine were originally introduced to each other in the home of Maurice Barrymore by his famous son, Lionel. We learned further that Frank was born in Caldwell, Ohio, educated at Amherst, Mass., and in his spare moments likes nothing better than to loll at the beach, soaking in the actinic rays and watching other people knock themselves out at volley ball, swimming and such nonsense. As a matter of fact, it had been arranged that the Atkinsons were to spend the following weekend at Sunset Beach with Art and Aileen in their beach cottage, and Aileen was somewhat fearful that the junior members of the White menage might sort of stampede the herd as it were.

We have since heard that the whingding on the sands was as edifying and altogether enjoyable as the Brown Derby doings, and that Frank and Elaine Atkinson went back to Metuchen invigorated no end by their quota of California sunshine and the elevating hospitality of the Whiteley's and the Whites.

As we write this copy, the Yuletide social tempest is roaring down on us like a typhoon, and we have a feeling that we are about to be caught up in a season of what Ivor Brown might call "agreeable depravity." There is probably no other industrial group that celebrates when the occasion is right so wholeheartedly or with such admirably controlled abandon as the petrolic people. At this time of the year there is usually such an unending succession of Christmas soirees, whangaroos, and conversaziones that even the strongest of us have to sneak out of the maelstrom once in a while and stretch prone in a dark corner for a brief holiday from the buzz. From early December to New Year's Day this surfeit of generosity continues, and it takes a rugged constitution to endure the full and sustained treatment.

One of the big events of the Christmas calendar so far as oil people are concerned is the Wildcat High Jinks at the Biltmore Hotel. This brings out petrolic folk in all phases of the industry and is one of the very few parties that doesn't cater to any specific group. The Wildcat show is designed to amuse and entertain the entire industry and it is normally attended by a pretty representative cross section. This year the Committee is headed by Henry Salvatori, president of Western Geophysical Company and it couldn't be under more competent direction. Henry is one of the best organizers in town and in the matter of performance is rarely satisfied with anything less than the best. That goes whether the business on hand is dominoes or a directors' meeting. To whatever he engages in, he gives his full and earnest attention and we shall be interested come December 12 to see the results of his fine hand.

Speaking of the Wildcats, the absence of Dave Kilgour is going to make the current show seem somewhat strange to this reporter. For many years we have sat with Dave down at the press table and have always enjoyed his cheery presence. He was the perennial secretary of the committee and through this activity alone had become known to thousands of California Oil men. His beaming countenance was to be seen at every consequential gathering and there was nothing he liked better than to be with the Wildcat group. We had occasion to know Dave a little more intimately than most people and we found him a widely read chap with a really extensive vocabulary and an analytical faculty that made him most interesting company. He was what in the oil business we term "a good guy," and his passing came as a genuine shock. We can say with deep sincerity that his life was well lived and it was a pleasure to have traveled some of the way with him.

An interesting and interested participant in the last board meeting of the Petroleum Production Pioneers was John Thatcher, the Standard Oil Company executive from San Francisco. John is the chap the lexicographers must have been thinking about when they created the word "immaculate," for it fits him as neatly as his clothes. He is as trim as a rigged three-master and as unruffleable as a French ambassador. If there ever was a paragon of courtesy and gentlemanliness, he is it. And mind you there is nothing the slightest bit standoffish about the chap. He is friendly too, and considerate of, everyone always and is consequently easy to know and easy to like. Indeed, ever since he first showed up here in the deep California south as a staff member of the Chevron cavalcade, we have made him our behavior pattern, and have tried to ape his Princetonian graciousness, but alas, have cried in sheer frustration at our own obviously crude efforts. And leave us not conclude that being sprucely apparelled is John's main virtue. No, sir, he is first a scholar, a scholar with a fine aptitude for translating lore into logic that explains very nicely why he is now roosting so high on the ladder of success.

A short note from Henry Grinnell of the Associates by the same name, indicates that he has for the past five months been perambulating around New York, where he is rigging up a series of civil defense exhibits that will be known as the "Alert America" convoys. There are to be three units constructed within the next few weeks. They are scheduled to begin touring the country by January 1, 1952, after which Henry will return to California for a much needed rest and a chestful of ozone. All of this is apropos of the fact that he was unable to attend the Petroleum Production Pioneers party at Rodger Young Auditorium on December 8 because on that same day he was to be in Richmond, Virginia, with one of the displays. It will be remembered that Henry is one of the original founders of PPP and when he is not present at any of its functions, it is for a very good reason.

HE IS STUDYING THE WAYS OF THE CAMEL

R. E. "Ed" Foss, vice president and manager of production for the California division of Sunray Oil Company, is a native of Glendale, California, and spent much of his boyhood in the comforting shadow of the Verdugos. In 1932 he graduated from that illustrious educational academy, California Institute of Technology, in mechanical engineering and shortly thereafter began his business career. For some time following his graduation he roughnecked in the oil fields, skipping here and there in search of a profitable place to alight, and then in 1935 he attached himself to Barnsdall Oil Company. He was still with this Company when it was recently acquired by Sunray and is likely to remain with it for some time. He started with Barnsdall as a petroleum engineer in the Mountain View field in Bakersfield and garnered further experience in the ways of the petrolic people in Elwood and later Rosecrans. By 1941 he was moved to the head office in Los Angeles as general superintendent and his most recent promotion to vice president and manager of production took place just after Sunray took over.

Ed has long been active in local API affairs and is usually to be found gracing the head table at all consequential meetings. He is an enthusiastic radio ham, or static engineer as they are sometimes known, and thoroughly enjoys the world-wide contacts that this interesting hobby develops. He is a member of the University Club where he finds the requisite calories and companionship to carry him through the rigors of a decidedly busy existence. For exercise of a more esthetic nature he spends the weekends pottering around his home garden in La Crescenta and has become quite an expert in the matter of soil cultivation. He is at the present time conducting experiments to determine how it is that a camel can go so long without water and is hoping the principle, whatever it may turn out to be, can be applied to his garden.

With a group of newsmen, we hied to the University Club recently where we lunched lavishly and then listened to Bob Pyles, field manager of the Southwest Exploration Company, expatiate on his boys and girls camps. The session was under the direction of Carl Totten, the capable Shell public relations expert and was naturally well arranged. The success of the project which will be considerably enlarged in 1952 is evidence of the good hearts of the petrolic people. There never yet was a worthy cause that didn't receive generous oil industry support and these Pyle mountain camps are no exception. They are doing an excellent job of molding young underprivileged boys into the shape from which they will naturally develop into responsible and reputable citizens and Bob Pyles is certainly an enthusiastic moderator of the whole idea.

We were greatly pleased to see our old friend, Ernie Pyles, elected to the board of directors of the Jergins Oil Company. Ernie has done a remarkable job for the oil industry during the past 40 years. His experience is wide and his knowledge of processes and practices is great and he has a profound conviction that if left to their own devices, the oil companies of the United States will do a much better production job than they could do under any kind of government supervision or direction. Ernie is a forceful speaker and has on many occasions represented sizable segments of the California industry at Sacramento and Washington, on matters of real import, and he has always managed to give a good account of himself. With all his talents he is a breezy, likable sort of chap who loves to congregate with his fellow oil men and swap reminiscences. His one diversion is horse racing and he is a pretty sharp picker of the payer-offers. Once, indeed, he had seven straight winners at Santa Anita and would have had the eighth one too if he had had any money left.

Just as we go to press comes the sad news that during a recent sojourn in the wilds of the San Joaquin Valley, Elmer Wycoff, the National Tube Company whiz, had a most

unfortunate and costly experience. It seems, by all means stop us if you have heard it, that Elmer's suitcase was filched, abstracted, or otherwise swiped by some person or persons unknown which we legal people consider one of the very lowest forms of laches and estoppel. Anyway, the person or persons still remain unknown and the victim reports a loss of 29 articles—that is, a set of dominoes and a corkscrew. It is not generally known but the Wycoff exchequer is frequently augmented by the domino acumen of the squire himself and this is consequently a much more serious loss than would at first appear. On trips like the one under discussion when Elmer could find no pigeon on which to practice his wiles, he always spent the evening hours perfecting his drawing technique, and he is perhaps the only man in California clubdom who has learned to hold the double-six for his last rock without showing it in his face.

Under the general chairmanship of Howard C. Pyle, president of Jergins Oil Company, arrangements are now being shaped up for the big national AAPG convention which is to take place here in Los Angeles, March 24-27, 1952. This will be a joint meeting that will be shared by the SEPM and the SEG, or the paleontologists and the geophysicists, and in view of the growing importance of adequate petroleum reserves to the national security will certainly be one of great significance. The president of AAPG this year is Frank A. Morgan, vice president in charge of exploration for Richfield Oil Corporation, and Los Angeles is definitely honored in having this aggregation of authorities in the oil finding sciences meet here. The deliberations will be contributed to by world famed geological lecturers and researchers and they will be eagerly listened to by other scientists in all parts of the world.

Graydon Oliver, the pioneer consultant and well known man about town, was one of the honored guests when the Western Pacific and Great Northern Railroads observed the 20th anniversary of one of the greatest events in their western history, to wit, the driving of the gold spike into the last tie connecting their lines at Bieber, California, on November 10, 1931. The program included breakfast at Klamath Falls, a vista dome trip over the "Inside Gateway" route with a stop at Bieber for the commemorative exercises, and a dinner party at Greenville, California in the evening. The entire trip was made by special train and Graydon was invited by F. B. Whitman, president of Western Pacific. Now, this honor was not conferred because he furnished the gold for the spike or hammered it in or anything like that. The fact is that Graydon was cashing in on the fame of his dad, Emery Graydon, one time engineer in charge of construction for the Western Pacific between San Francisco and Beckwith Pass and the original locator of the route that the Western Pacific line actually followed.

By way of last minute roundup we note that Joe Robinson, the Santa Fe Drilling prexy, is back from a trip to Venezuela, and looking none the worse for his experience. C. C. Kifer, the Shell Company production chap down at Long Beach, is under doctor's orders but is hoping to be around and about again soon.

Del Valle Wildcat Digs

Southern California Petroleum Corporation's N.L. & F. No. 2 wildcat well on Sec. 20-4n-17w at Del Valle is making progress with the drill at 7410 ft. Standard's Blair No. 7 test on Sec. 15-4n-17w in the area is drilling at 1860 ft. In the Chatsworth area, Sunray Oil's Porter Estate No. 81-16 wildcat on Sec. 16-2n-16w is starting work.

Trico Well Drills Ahead

Standard Oil is drilling at 3340 ft. with its Title Guarantee & Trust No. 4 on Sec. 1-25s-23e in the Trico area of Kern County. The company recently abandoned its Cutter Unit No. 3 on Sec. 29-23s-22e at Alpaugh, one-half mile north of Trico gas production.

New Advertising Manager At Gardner-Denver Company

Carson L. Ruyle has been appointed advertising manager of the Gardner-Denver Company, Quincy, Illinois, according to a company announcement. Mr. Ruyle assumes the position formerly occupied by Lt. Damon P. Tunnicliff, who has been called to active service in the Navy and who is assigned to the Destroyer U.S.S. Power for duty in the Newport, Rhode Island area. He has capably filled the position of advertising manager of Gardner-Denver for the past five years.

Mr. Ruyle joined the Gardner-Denver Company in 1930, serving in various capacities in the company's engineering and accounting departments. After a brief absence from the company, he rejoined it in 1941 and since then has been a member of the sales division at the Quincy office. His work with the company has given him a thorough knowledge of product features and sales procedures.

Paloma Try Digs

Ohio Oil Company continues to drill steadily ahead with its KCL-A No. 72-4 wildcat well on Sec. 4-32s-26e in the Rio Bravo area of Kern County. The depth last reported was 9340 ft.

Camden Test Finds Little

Having encountered only thin streaks of oil sand in drilling to a bottom of 6540 ft., Caminol Company of Hanford abandoned its Caminol-Coleman No. 1 on Sec. 8-17s-20e in the Camden area, Fresno County. B. B. Breckenridge's Georgeson No. 1 on Sec. 31-16s-21e is a location at this writing. Standard of California completed its No. 6-9-7E test on Sec. 7-21s-15e in the Jacalitos area at a plugged depth of 2680 ft. Drilled to a total bottom of 2747 ft., representative output gauge is yet to be established. E. A. Bender's Glenn No. 1 wildcat on Sec. 22-16s-13e in the Ciervo Anticline area of Fresno County is down 270 ft. and rotary rig is being moved in.

THIS

LAUGH OFF!!

The young lover was obviously reeling out a heavy line, trying to impress the beautiful young girl at his side.

"Those soft lovely hands," he whispered, "your warm lips and those beautiful eyes. Where did you get those eyes?"

The girl, unimpressed, answered, "They came with my head."

A cautious man wrote the following to a mail order house: "Please forward to me one of those gasoline engines described on page 135 of your catalog. If the engine is any good I will send you a check for it."

A few days later he received this reply from the mail order house: "Please send us your check, and if it's any good, we'll send you the engine."

A sweet little nun in a convent received a ten dollar bill from a distant relative. Not having any use for the money, she looked around for some good thing to do with it. Coming down the street was a very shabbily dressed man. The nun stepped to her window, held out the money and gave it to the poor fellow. As he took it the nun merely said, "God speed!"

A few days later the man came back to the convent and handed her an envelope. He remarked: "Sister, here is two hundred dollars. God Speed came in first.

First lady: "Does your husband remember your wedding anniversary?"

Second lady: "No, so I remind him of it in January and again in June and get two presents instead of one."

The lawyer was browbeating the witness. "I understand," he said fiercely, "that you called on the defendant. Is that so?"

"Yes," replied the witness.

"What did he say?" continued the lawyer.

At this point the counsel for the opposition objected that evidence as to conversation was not admissible. An hour's argument ensued. Then the court retired to consider the point, returning after considerable time to announce the question a proper one.

"What did he say?" repeated the lawyer with a confident smile.

"He wasn't home, sir," came the reply.

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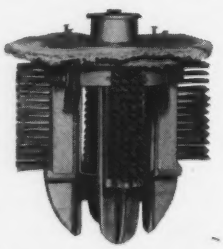

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